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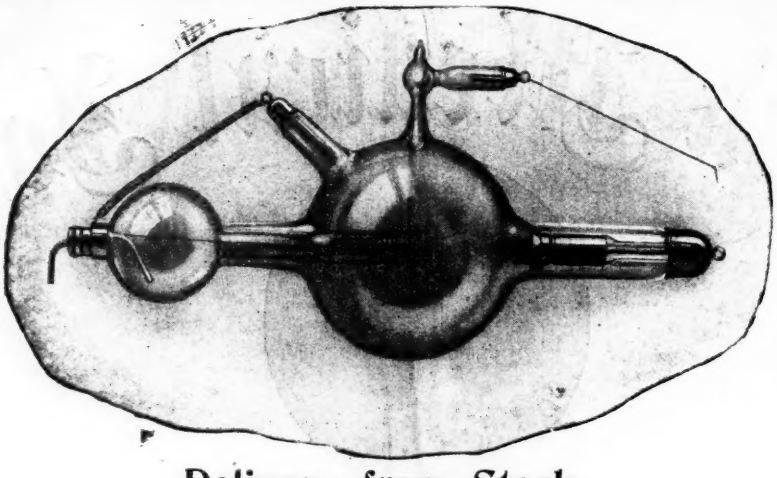

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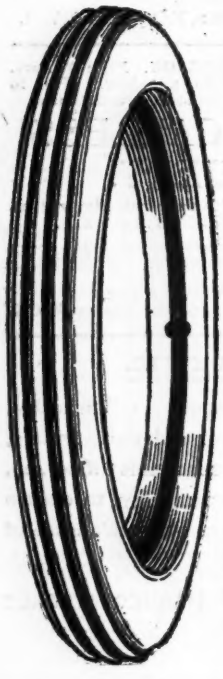

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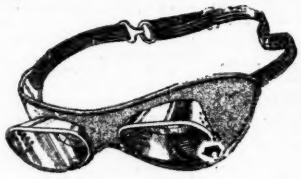

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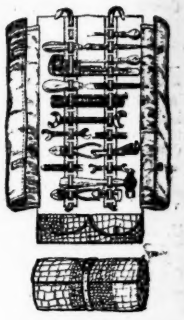

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INTRODUCTION.

IN the investigation of disease the necessity for the study of symptoms has been recognized since the days of Hippocrates. Yet, notwithstanding the vast amount of labour spent on the subject, our knowledge to-day is far from complete. In an attempt to improve this knowledge I have been guided by certain principles the application of which has been attended with a measure of success. I desire to-day to illustrate the application of these principles in one field of research in which I have been labouring for over thirty years. During that research I have learnt many things, one of the chief being the fact that to investigate symptoms in any branch of medicine requires a long training in the school of experience. I have frequently had to discard observations made after fifteen or twenty years' experience simply because I found out that those observations were made before I had acquired the knowledge necessary to elucidate the peculiar features of a symptom. This has happened not only with the obscure symptoms that required some apparatus for their revelation, but has occurred frequently with symptoms perceptible to the unaided senses. It is for that reason I am so insistent that you should take particular pains to educate yourselves before you start on a piece of research, for if you do not you will find, after a long time spent in laborious work, that your results have been rendered valueless through imperfect observation. I have by me a vast accumulation of observations of little or no value because they were made at a time when my training was defective. These I sometimes sadly survey, although I recognize it was through this experience that I acquired such limited knowledge of the subject as I now possess. This is really the reason why a great many investigations which have entailed an enormous amount of labour have resulted either in no advance being made, or, which not infrequently happens, wrong conclusions being drawn whose application actually hampers the progress and misleads the practice of medicine.

I shall from time to time refer to investigations drawn from my own and other peoples' failures in order to direct attention to the reason of their failure. There is more to be learnt from the discovery of the cause of failure than from the contemplation of success. To-day, however, I wish to describe to you an inquiry that has been attended by a measure of success, in order that you may realize what really constitutes clinical research. I draw far-reaching conclusions from a symptom (hyperalgesia of skin areas) which can be recognized by the unaided senses. It is so easily perceived that it has been treated as a matter of no importance. Yet a knowledge of the mechanism of its production reveals certain responses of the body the recognition of which gives a new outlook on the nature of a great many diseases. The present classification and description of disease is so faulty and frequently so misleading that, as knowledge advances, a complete reconstruction of classification and description will be called for. Without going so far as to say that the key to the reconstruction is to be found in the illustration I am about to give, I do believe that this illustration reveals so much, and presents certain diseased states in such a reasonable way that a justifiable expectation is aroused that by some such method new light will be thrown on an obscure portion of disease.

It is nearly thirty years since I found that certain diseases of the abdominal organs produced an alteration in the sensibility of the skin and other tissues of the external body wall. It occurs so frequently that every physician and surgeon must constantly meet with it, but it had been overlooked or ignored. Since I drew attention to it, only a few people have employed it as an aid in diagnosis. I have continued its investigation, and as years have passed I have found that a long training has been necessary to bring to light the full significance of the symptom, and even to-day I am far from comprehending the wide field of research it has opened up, so that I am capable of dealing only with a fringe of the subject. It requires little foresight to recognize that, when a full knowledge of cutaneous hyperalgesia and its associated phenomena is obtained, the views of physician, surgeon, and neurologist, and even of the psychologist, will be profoundly affected, and much of that which is to-day accepted as knowledge will be found to fall far short of the truth.

I. CLASSIFICATION OF SYMPTOMS.

It is a matter of knowledge common to every general practitioner that an explanation of the complaints of a large majority of his patients cannot be found by reference to any textbook. The cases he can recognize according to textbook descriptions are mainly those where the disease has reached an advanced stage, as in dropsy from heart disease, and consumption after the lungs break down, or when some terminal affection such as apoplexy occurs. In consequence the doctor is often at a loss what name to give the complaints from which his patients suffer, and he has to resort to the substitution of symptoms in place of the real cause, so that we get names such as neurasthenia, gastralgia, hyperchlorhydria, angina pectoris, tachycardia, albuminuria, which convey no definite information. The reason for this is that the classification of diseases is not based upon a true knowledge of disease. It is the outcome of the time when pathology was dominant. With the introduction of accurate methods of observation, the nature of the diseases found after death were clearly demonstrated, and a classification of the different diseases that affected the different organs was made. This classification was so precise and definite, and seemingly so accurate and scientific that it was adopted not only by the pathologist but by the clinician. The latter used this classification as a guide to search for and explain the physical signs which he detected in the living patient, and thus this classification became the standard for clinical medicine.

For a long time this seemed quite satisfactory, and was of value, but time has shown that for the practice of medicine it is not only faulty but misleading, in that it diverts attention from the real causes of disease and from the more important symptoms—those that are not included in what are called physical signs.

The need for a presentation of disease which conforms with the aspect of disease presented by the living is urgently called for, and the communication I am about to make is given with that object.

I have already pointed out to you that there has been no orderly arrangement of the large mass of symptoms which have been recognized. So long as facts are accumulated with no orderly arrangement the progress of medicine will be hampered and matters essential to its progress will be obscured. I have therefore attempted a classification which is simple, yet helps greatly in understanding the nature of symptoms. This classification of symptoms is based upon the mechanism of their production, and are:

1. *Structural symptoms*—that is, symptoms based on a modification of the tissues of the organ, and which are chiefly revealed by physical signs.
2. *Functional symptoms*—that is, symptoms due to a modified or deranged function of an organ.
3. *Reflex symptoms*—symptoms due to a reaction on the central nervous system or on the nervous mechanism of organs.

It is to the last group I wish to direct your attention, so as to show the mechanism by which a great number of symptoms are produced, and to indicate some of the methods which are necessary to the pursuit of medical investigation.

II. THE STUDY OF REFLEX SYMPTOMS.

I have already remarked that much valuable time is often spent in research work which fails to achieve results at all commensurate with the labour devoted to it. One-half of the battle in all research work consists in having a definite object, with a clear conception of how the object is to be achieved. The principle which guides the inquiry into the nature of reflex symptoms has not only helped in the discovery of facts of great value, but has revealed the methods by which other objects essential to the progress of medicine may be pursued. It has demonstrated, for

instance, that there is an intimate relation between the organs and definite areas of the skin, or rather between the organs and the distribution of the sensory nerves in those areas, and between the organs and parts of the skeletal muscular system. A knowledge of this relation at once reveals which organ is at fault. When we detect sensory disturbances—pain or hyperalgesia—in these parts, or when we find a persistent contraction of the muscles, we are able to relate these to a definite structure within the body. This fact being established, there is given the object, which has been only partially accomplished, of the linking up the organ with the disturbed region in the external body wall. This can be accomplished by the careful examination of the disturbed regions and correlating them with the disease discovered on the operation or *post-mortem* tables.

In addition to the discovery of the organ at fault, we have the opportunity of discovering another very important matter—namely, the nature of the stimulus which is capable of producing these disturbances in the external body wall. It requires a stimulus of a peculiar kind to produce these reactions. Some disease processes produce one form of reaction and others produce other reactions. The careful noting of the different reactions and their correlation with the disease process will reveal the nature of the stimulus which may be acting, and so we get at a very early stage, from the symptoms produced in the external body wall, a sure indication, not only of the organ at fault but of the kind of disease present in the organ.

The recognition of the phenomena produced by reflex stimulation by disease will be found to open new fields of investigation in the central nervous system. The radiation of stimulation, for instance, shows there are paths in the central nervous system hitherto unrecognized. The peculiar fields of cutaneous hyperalgesia and of the radiation of pain in diseases of such organs as the heart, gall bladder, ureter, and bowel, shows that the stimulus entering the central nervous system pursues a very definite course. This is also seen in the production of such symptoms as occur in renal colic, as represented in Fig. 10.

In addition, it is only by the study of these symptoms that a full knowledge of the afferent system of the nerves belonging to the involuntary nervous system can be acquired.

I have already described to you that ill health leads to the production of a great variety of symptoms, and suggests the search for some simple cause capable of producing these effects. The trained investigator may detect the cause in a variety of ways—by the intelligent questioning of the patients as to the onset of their ill health and their sensations, by the recognition of the peculiar character of the symptoms in the way they are grouped. Certain toxins give rise to reactions peculiar to them, and we may recognize the diseases they represent by the grouping of the symptoms. These reactions are shown not only by the peculiar association of phenomena but also by specific effects upon individual organs. The recent observations of Marris and R. M. Wilson, for instance, demonstrate that certain microbes produce toxins that have a peculiar effect upon the heart. By such means there is every reason to expect that we will recognize that groups of symptoms are indications of and peculiar to certain diseased states, although at present our outlook is confused by an inability to distinguish these groups. You will thus see how incumbent it is on us to note carefully each individual symptom, to watch the development of symptoms by keeping in touch with the patients, and applying the principles which are the basis of our scheme and the reasons for our enterprise.

III. Mechanism of an Ordinary Stimulation.

Before discussing the nature of these reflex symptoms it is necessary to appreciate the mechanism by which many symptoms are produced. When a common sensation arises in any part of the body, no matter how it is produced, it is always accompanied by a sense of locality. This sense of locality may be precise and definite, or it may be vague and diffuse, but it has a reference to some particular part of the body. Fig. 1 represents diagrammatically the simplest form of sensation with its attendant localization. It represents a portion of skin (A) which is stimulated and from which a sensation passes into the central nervous system and reaches the sensorium (S), where the sensation is not only perceived, but the part of the body recognized to which the stimulated nerve cells are distributed.

Mechanism of the Radiation of Sensation.

The place in which the sensation is felt is not necessarily the place which received the stimulus. In most instances a local stimulus applied to the external body wall gives rise to a sensation whose localization by the sensorium corresponds to the part stimulated. It often happens that the area in which the sensation is felt is greater than the part stimulated, and it is then difficult to explain the radiation. An experience related by Professor Sherrington supplies a fitting explanation. The application of a mustard plaster to his chest over the region of the upper part of the sternum gave rise to an unpleasant sensation on the inner side of each arm just above the internal condyles.

It is known that the nerves supplying the skin of the upper part of the chest and the skin on the inner side of the elbow arise from cells situated close together in the spinal cord, and leave the cord by the second thoracic nerve—one branch of this nerve going to the chest and the other to the arm.

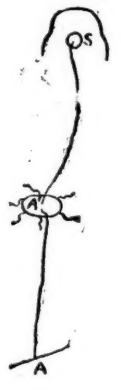

FIG. 1.

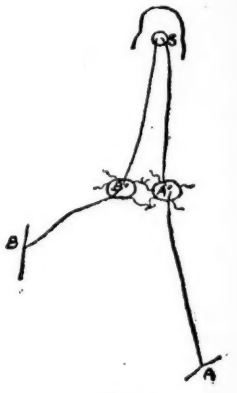

FIG. 2.

FIG. 1.—A stimulus applied to the skin, A, is not only recognized by the sensorium, S, but is referred to a definite area, A'.

FIG. 2.—Illustrates the radiation of sensation. A stimulus applied at A is felt not only at A, but in a part of the skin, B, at some distance. This is represented as taking place in some part of the central nervous system where the cells A' and B' lie in close proximity.

The manner in which the radiation of the sensation takes place is shown diagrammatically in Fig. 2. The stimulus conveyed from A enters the cell A' in connexion with the nerve fibre, and not only gives rise to a sensation referred to A, the part stimulated, but affects the cell B' in its immediate neighbourhood. The sensorium recognizes the extended stimulation, and refers the resulting sensation to that portion of the skin, B, which supplies B'. There are many other instances of this kind of referred sensation—for example, the well known instance of the knee pain in hip-joint disease.

From these facts another principle can be deduced—namely, that if any part of the nervous system which conveys the sensation of pain from the skin to the sensorium be stimulated, the resultant sensation is referred not to the part stimulated but to the distribution of the nerve at its periphery. Thus, when the cell B' was stimulated, the brain became conscious of the stimulation, but the sensation was felt in the skin at B.

IV. Mechanism of a Motor Reflex.

A stimulus applied to the sole of the foot may give rise to a sensation of touch, or tickling, or pain, and at the same time may produce a contraction of certain muscles. It is not necessary to infer that it requires a special peripheral end-organ and a separate nerve fibre to receive and convey the stimulus to the sensorium, and another to convey the stimulus to the motor centre in the spinal cord. A simple diagram (Fig. 3) shows how this comes about. The stimulus applied to the skin, A, passes into the cell A', and from this cell one stimulus proceeds to the sensorium, and another to the motor cell C', causing a muscular contraction, C.

This reflex stimulation may affect many other centres some of them easily recognizable, others so elusive that their presence can only be inferred. Later on, when dealing with the reaction produced by visceral disease, it will be shown that a stimulus arising at the periphery may provoke a variety of demonstrable reactions differing widely in character.

V. Mechanism of Radiation in Disease.

These simple illustrations give a clue to the manner in which symptoms are produced by disease reacting on the central nervous system. This is shown in the simplest way when a demonstrable disease gives rise to symptoms that are easily recognized. Most of us know from personal experience what toothache is, and we have often the opportunity of studying its symptomatology on our patients, if not on ourselves. It frequently happens that the pain set up by a diseased tooth is not limited to the offending tooth, but is felt along the jaw, in the other

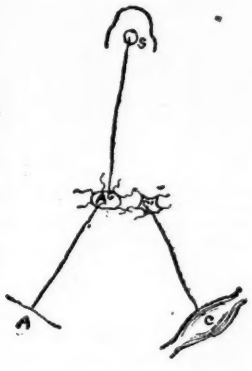

FIG. 3.

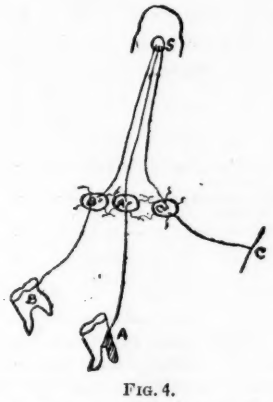

FIG. 4.

FIG. 3.—Illustrates the mechanism of a motor reflex. The stimulus to the skin A produces not only a sensation and its localization, but the stimulus passing through A′ affects the cell C′ and produces a contraction of the muscle C.

FIG. 4.—Illustrates the radiation of pain set up by disease. The diseased tooth A causes pain not only in a neighbouring tooth, B, but also in the skin of the cheek, C.

teeth, and sometimes in the cheek. Indeed, the sound teeth may be so painful, on pressure being applied to them, that the dentist may pull a sound tooth in place of the diseased one. Pain may not only be felt in the cheek, the skin may be so hypersensitive that on brushing the hair pain is produced in place of the normal sensation of touch.

It is to be noted that the spreading of the pain and tenderness in such an instance is not due to the extension of any morbid condition at the periphery—inflammation, for instance—to the neighbouring teeth, for there is no sign of anything the matter with those teeth, while the skin of the cheek is demonstrably free from any diseased condition. Moreover, the discovery and removal of the diseased tooth is followed by the complete disappearance of all pain and tenderness from the other teeth and from the skin of the cheek.

Seeing that these phenomena are produced by one diseased tooth, and seeing that the pain and tenderness of the sound teeth and of the skin of the cheek is not due to any connexion with the offending tooth at the periphery, we are driven to look elsewhere for some connexion between these widely separated parts. As there is no communication between nerves except at the cells in the central nervous system from which they arise, we seek for a relation between the nerves of these teeth and the skin of the cheek in the central nervous system. In the case of the diseased tooth the pain was felt not only in the diseased tooth or its immediate neighbourhood, but also in other teeth and in the skin of the cheek, and this radiation is explained by a reference to the diagram Fig. 4, where it is shown that a stimulus arising from the diseased tooth A sends a stimulus into the central nervous system affecting the cell A′ belonging to the nerve of the diseased tooth, so that the sensorium refers the resultant pain to the diseased tooth; but the stimulus also spreads from the cell A′ to the cells B′ and C′, and the resultant pain is referred by the sensation to the healthy tooth B and the healthy skin of the cheek C.

VI. The Tissues Sensitive and Not Sensitive to Mechanical Stimulation.

A step preliminary and necessary to understanding the nature of the symptoms of disease is a knowledge of the sensibility of the different tissues of the body. A great field for investigation still lies unexplored, and so long as it is neglected the understanding of the symptoms of disease will be defective. In the attempt to investigate this field I have only been able to make a slight advance, but such as it is, it has thrown new and unexpected light on a great many problems connected with the symptomatology of disease.

If we inquire into the response of the different tissues to such mechanical stimuli as produce the common sensations of pain, touch, heat, pressure, etc., we discover that these sensations are limited to certain portions and organs of the body, and that there are large portions of the body totally insensitive to all such stimuli. Looking at the matter broadly, we find that while all the structures which make up the external body wall are more or less sensitive to such stimuli, the viscera and the serous lining of cavities are, with one exception, irresponsive to this kind of stimulation.

Thus, if we apply a mechanical stimulus to the skin we produce a sensation peculiar to the nature of the stimulus, as, for example, touch, pain, heat, or cold. If we apply the same stimuli to the viscera or to the serous surfaces or internal structures of organs we get no response, or rarely a response of a different nature. Thus, if we prick the skin near such an orifice of the body as the anus, we can produce pain, but as soon as the mucous membrane is reached the pricking no longer produces pain. In testing other orifices of the body—for example, the mouth—a modified sensation is felt, but at a certain depth of the gullet all sensation ceases.

If we inquire into the reason for this difference in the response to stimulation we will find it in the nerve supply of these different tissues. Thus the tissues which give rise to sensation in response to mechanical stimuli are supplied by the cerebro-spinal nerves, while the tissues which do not respond receive no nerves from the cerebro-spinal nervous system, but are supplied only by the sympathetic nervous system, or what is sometimes spoken of as the involuntary nervous system.

VII. Insensitiveness of the Viscera to Mechanical Stimulation.

This view of the insensitiveness of the viscera to mechanical stimulation has been repeatedly demonstrated. Haller described a series of experiments where he exposed in animals certain viscera by operation, leaving an opening by which they could be reached. Afterwards, while the animal was feeding, he introduced through the opening instruments that cut and burnt the organ, and the animal paid no attention to what he was doing. I have myself repeatedly tested in the conscious human subject the various organs by cutting, stitching, and tearing, and no sensation was elicited.

The insensitiveness of the viscera and its full significance has not been grasped. Indeed, the belief is common that the viscera are endowed with common sensations, and what is supposed to be evidence is easily obtained.

VIII. Methods for Testing the Sensibility of Organs.

The sensitiveness of tissues to stimulation is one of those apparently simple problems which it is assumed anyone can solve. As a matter of fact, no one has been sufficiently trained to undertake such an investigation. A large amount of work has been done on the subject by physiologists, neurologists, psychologists, physicians, and surgeons, yet notwithstanding their opportunities they have failed to investigate the matter in a manner calculated to reveal the true facts, and so the conclusions which are current to-day are based on imperfect observations and in consequence are misleading. I comment on this fact as one of many instances where the progress of medicine is hampered by a lack of understanding of the manner in which investigation should be conducted. I do not at present wish to enter fully into the matter, but mention a few points to show the imperfect methods which have been used.

The first point which arises is, that no conclusion should be drawn as to the sensitiveness of an organ which has been stimulated through a structure itself sensitive. Nearly all conclusions have been drawn from observations made by pressing on the organs through the sensitive abdominal wall. Many observers state that they have demonstrated the sensitiveness of an organ by first observing its position by various methods, such as the *x* rays, and later by pressing over it and eliciting pain. The error here lies in the failure of the observer to take the precaution of excluding the sensitive external body wall. If, for instance, when such sensitiveness has been detected, an attempt is made to delimit the area that is sensitive, it will be found that the size and shape of the area painful on pressure bears no relation to the size and shape of the organ supposed to be tender. I discussed this matter with a very skilled physician. He demurred to my statement that there was no evidence of the sensitiveness of organs. He declared that he had a patient with a large liver which he could demonstrate to me was extremely tender. I asked to see this patient and was shown him. The enlarged liver was easily palpated, the lower margin being sharp and well defined. On gently pressing over the liver the patient winced from the pain. I asked the physician to map out the region that was so manifestly tender, and to his surprise he found the tenderness extended 3 in. lower than the margin of the liver. (Fig. 5.)

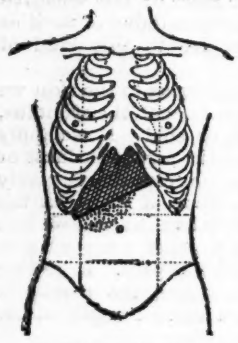

FIG. 5.—The shaded area represents the liver, the dotted area the extension of hyperalgesia beyond the liver margin, showing the pain elicited by pressure over the liver was due to an increased sensitiveness of the tissues of the external body wall.

It is well known that pain does occur in disease of the viscera, and in animals distress has been provoked by certain experiments. But here the experimenter never realized that the evidences of suffering, even if these were due to pain, gave no information as to the locality of the pain—a fact absolutely essential to the understanding of the mechanism by which visceral pain is produced. The same neglect of this essential matter is found in the observations of surgeons and others who have studied pain in the exposed organs of the human subject.

When, in testing the sensibility of organs, pain is elicited, a clear conception of the nature of the stimulus giving rise to it should always be obtained. The need for this and for the recognition of the locality in which a pain is felt is shown by the following experience. In resecting the bowel in a patient who was not under the influence of an anaesthetic, I tested the sensitivity of various organs and their coverings. On pinching the bowel the patient, after a slight delay, complained of pain. I asked him where he felt the pain, and he pointed to the region of the umbilicus. The portion of bowel stimulated lay some distance off on the left side, and it was manifest that the place to which the pain was referred had no direct relation to the part stimulated. Had I been content with simply noting that pinching of the bowel produced pain, I would have overlooked this very important matter of localization.

But there was more in the observation. There was a slight delay in the pain which came in wave-like intensity, and I observed that the pinching had set up a strong peristalsis of the bowel, and that the pain only occurred when this peristalsis was set up. So here I had evidence that the mechanical stimulus I applied only produced pain when a vital process—that is, peristalsis—was set in motion in the bowel.

There are other matters which have been overlooked in this investigation, but what I have said will suffice to show the need for a thorough undertaking of methods before we can observe accurately. Although I do not claim that I have solved the problem of visceral pain, yet the pursuit of this inquiry for many years has given me a certain amount of skill, which has enabled me to discover many facts from which I have been able to draw certain reasonable deductions. These have proved of considerable value in practice.

(To be continued.)

SOME POINTS IN THE PROGNOSIS AND TREATMENT OF CHRONIC NEPHRITIS.*

BY

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THE management of cases of chronic Bright's disease in private practice is, under the methods generally employed, most tedious and uninteresting. It is the purpose of the present lecture to point out some of the newer methods of examination which not only lend a fresh interest to the cases, but which enable us to adopt a more scientific line of treatment and permit of a more accurate prognosis.

Prognosis.

In order that one may make a well considered prognosis it is necessary first to adopt some practical form of classification, and the classification which I suggest to you is that seen in the accompanying table:

Classification of Chronic Nephritis.

TYPE.	Urine.				Oedema.	Uraemia.	Eye Changes.	Blood Pressure.	Prognosis.	Renal Efficiency.
	Sp. gr.	Quantity.	Albumin.	Casts.						
Degenerative (cloudy swelling)	+	−	−	−					Good	
Tubular nephritis (large white)	+	−	+	++	++	−	−	−	Fair	Fair
Glomerular	−	−	+	+	−	+	+	+	Bad	Bad
Secondary sclerotic (chronic interstitial)	−	+	−	−	−	++	+	+	Bad	Bad
Arterio-sclerotic ...	∓	+	−	−	−	−	−	++	Good	Good

There are, of course, cases of chronic nephritis which cannot be fitted into any one of these categories—cases of mixed nephritis—but for practical working purposes you will find that the classification is one of great value, and that the time spent in obtaining the information under the various headings has not been wasted.

This classification splits up the old group of "chronic diffuse nephritis" into two: (*a*) tubular, (*b*) glomerular; and of these the latter is by far the more serious. It also draws a sharp distinction between the secondary sclerotic (contracted granular) kidney and the arterio-sclerotic.

The most important distinction between these varieties of chronic nephritis is the degree of "renal efficiency," by which I mean the measure of the power of the kidney to excrete water, salts, nitrogenous and other waste products.

For gauging renal efficiency most of the tests are such as can be employed in general practice, the only apparatus required being a large vessel graduated in cubic centimetres or ounces, a tall narrow cylindrical vessel, and a small specific gravity bulb. The materials for carrying out the other tests are always to be obtained at the clinical laboratory to which the specimens of urine are to be subsequently sent.

Tests of Renal Efficiency.

1. *Water Excretion Test.*—Empty the bladder. Two and a half hours after breakfast give 500 c.cm. (17½ oz.) of water, and collect all the urine that can be passed in the next two hours. A healthy person passes about 400 c.cm.

2. *Specific Gravity Test.*—The urine is to be passed every two hours from 8 a.m. to 8 p.m. Each quantity is measured, and the specific gravity taken. The urine passed between 8 p.m. and 8 a.m. is also measured, and the specific gravity taken. In health the quantity of day urine should be greater than the quantity of night urine; the specific gravity of the various day specimens should show wide variations, and at least once in the

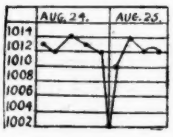

Chart 1.

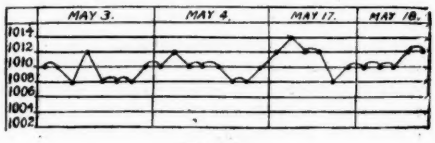

Chart 2.

CHART 1.—Two-hourly specific gravity curve of urine. Severe case of glomerular nephritis.

CHART 2.—Two-hourly specific gravity curve of urine. Case of glomerular nephritis, moderate severity.

* Abstract of a post-graduate lecture delivered at the Bristol General Hospital, July 17th, 1919.

day should reach 1020. Fixation of specific gravity, and especially a persistent low specific gravity, shows renal inefficiency. (See Charts 1, 2, 3.)

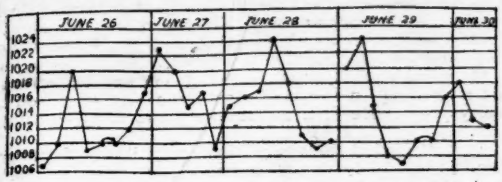

CHART 3.—Specific gravity curve of urine passed two-hourly. Case of glomerular nephritis, convalescent.

3. *Test of the Rate of Secretion.*—Inject 6 mg. of phenolsulphonephthalin into the buttock muscles, and give the patient a drink of water. At the end of one hour and ten minutes get the patient to pass urine, and again at the end of a second hour. Send the two specimens of urine to the clinical laboratory, where the percentage of dye is estimated by the colorimeter. A healthy kidney excretes about 60 per cent. of the dye in the two hours and ten minutes. Small capsules of phenolsulphonephthalin containing 6 mg. in solution can be obtained at any of the large chemists. The ordinary hypodermic syringe can be used.

4. *Sodium Chloride Excretion Test.*—Send to the clinical laboratory a sample of the mixed twenty-four hour urine for the estimation of sodium chloride. If the amount of sodium chloride excreted falls to one or two grams per diem (average in health 15 to 20 grams) the prognosis is grave.

5. *Estimation of Non-protein Nitrogen in the Blood.*—Draw off 10 c.cm. of blood from a vein in the arm and send this to the clinical laboratory for the estimation of the non-protein nitrogen (urea, uric acid, and creatinin). If this amounts to more than 0.4 gram per litre there is a dangerous accumulation in the blood, possibly due to alteration of kidney efficiency. The blood (together with 1 c.cm. of a solution of potassium oxalate to prevent clotting) is to be drawn off in a sterilized syringe provided for the purpose by the laboratory.

No one of these tests is by itself of great value, but the combined tests, together with the data mentioned in the table (albumin, casts, blood pressure, etc.) will enable us to form a fairly accurate estimate of not only the efficiency of the kidney in any given case of nephritis, but also of the general condition and progress of the patient.

The tests should be repeated at least every six or twelve months and any variation noted. During the whole period of examination the patient is kept on the standard renal diet, to which I shall refer later.

Tests of renal insufficiency are superior to the old tests for albumin, casts, etc., inasmuch as they enable us to detect disease of the kidney in a much earlier stage. In the future we may look forward to detecting the pre-albuminuric stage of nephritis. At present we seldom detect the chronic case until two-thirds of the kidney substance is destroyed. Such tests are also of value in distinguishing between the coma of nephritis (uraemia) and the coma of arterio-sclerosis (cerebral haemorrhage or thrombosis).

Space does not permit me to touch on other important points of prognosis, but I would point out that the outlook in cases with simple chloride retention is good, even if uraemic symptoms be present, whilst that of cases with nitrogen retention with uraemia is much more grave. In secondary sclerotic nephritis, if the patient escapes the dangers of uraemia, he is, if a man below 50 years of age, most likely to succumb to cardiac failure, whilst at any later period cerebral haemorrhage is most to be feared.

Treatment.

The greatest advance in recent years has been the recognition of the fact that many cases of chronic Bright's disease are originated and kept up by cryptic infections such as pyorrhoea, chronic nasal suppuration, diseased tonsils, and chronic bowel infections.

We are, of course, familiar with the septic origin of acute nephritis. We have had one such case recently in this hospital.

A soldier had suffered for four months from a shattered elbow with profuse suppuration. During this time he developed nephritis. On February 1st, 1919, Mr. Hey Groves amputated the arm through the lower third of the humerus; severe secondary haemorrhage a week later necessitated blood transfusion, but by February 14th the albumin which had been two parts per thousand was reduced to a mere trace, and by February 24th the urine was normal.

Similarly in chronic nephritis the removal of a septic focus in the teeth, nose, or ear, may lead to immediate amelioration of symptoms, and ultimately to complete recovery. In this way chronic nephritis is comparable to rheumatoid arthritis and it is worthy of note that a very large percentage of the cases of rheumatoid arthritis ultimately die of chronic nephritis.

It is not my intention to touch upon the subject of drug treatment in chronic nephritis, this being of far less importance than the arrangement of the dietary and habits of living. If you follow out the tests I have indicated, then the main principles of dietetic treatment are plainly before you.

1. Where renal efficiency is low and nitrogen is retained you must limit the intake of nitrogenous food, and allow plenty of fluid.

2. When there is general oedema and the chloride elimination is low, you must cut off the supply of salt and diminish the allowance of water.

Dealing first with the cases of nitrogen retention, we find these are chiefly patients who, though suffering from chronic interstitial nephritis, are yet in moderate health and capable of conducting their business. To such we allow 2,500 to 3,000 c.cm. (4 or 5 pints) of fluid a day and limit the nitrogenous intake to about 50 grams a day. These requirements are met by a diet such as the following:

Breakfast.—Porridge prepared from 2 oz. of dry oatmeal, bacon, 3 oz. of toast, tea.

Lunch.—Milk pudding or vegetables, bread-and-butter 3 oz., jam, fruit, and sugar.

Tea.—Tea, 2 oz. bread-and-butter.

Dinner.—Vegetable soup made with milk, 3 oz. of fish, flesh, or fowl, 3 oz. potato, cooked or fresh fruit, sugar.

Sugar is given plentifully to raise the calorie value of the diet and to spare the nitrogen katabolism. Peas, beans, asparagus, onions, rhubarb, strawberries, condiments, meat extracts, alcohol, and tobacco are excluded, either as being too rich in nitrogen or as being renal irritants or stimulants.

This, which I call a standard nephritic diet, is suitable for use when the urinary tests are being made. From time to time the dietary may be varied; thus the patient may be ordered to take only a Continental breakfast of rolls and coffee, or may be directed to go for two days in the week without meat. No distinction is made between fish, fowl, and red meats.

In cases of chronic parenchymatous nephritis, with retention of chlorides and a surplus of water in the tissues, the indications are to cut off altogether the intake of salt and to reduce the consumption of water to about 1,000 c.cm. (2 pints) daily. It has been claimed that the oedema of chronic parenchymatous nephritis may be reduced entirely by adherence to a salt-free diet, with limitation of fluid intake. This is sometimes known as the *Karrell treatment.* Karrell's dietary was as follows:

One and a half pints of skim milk daily (7 oz. every four hours), 6 oz. of coffee. Unless there be uraemia or exhaustion, keep this up for one week, then add stewed fruit, bananas, rice, arrowroot, cereals and cream, toast, vegetables, and sugar. Later give eggs and meat. Use no salt for cooking or in eating. Limit liquids to one and a half pints a day.

The reduction of oedema by the adoption of a salt-free diet has not been very successful. When an oedematous case of large white kidney is first put to bed an increased flow of urine is the immediate result of the rest given to the heart, but in nine cases out of ten the oedema persists, however strictly the diet be enforced.

The reduction of the oedema by the use of diuretics is equally disappointing. Indeed, in cases of pure nephritic origin the use of diuretics is contraindicated as tending to lower renal function. Alkaline salines are least open to this objection and may be tried. On the other hand, such oedema as may be due to circulatory failure is readily removed by diuretics of the digitalis and caffeine groups.

Successful cure of the oedema of chronic parenchymatous nephritis is much more likely to follow the procedure suggested by Epstein. He pointed out that the steady loss of large quantities of albumin in this variety of nephritis caused a decrease in the osmotic pressure of the blood, which fact favours the absorption and retention of fluid by the tissues. Hence the great oedema. The blood in such cases shows a marked decrease in protein and an increase in fatty bodies (lipoids). The indications for treatment, therefore, are first to increase the protein content of the blood and thus restore its osmotic power, and, secondly, to remove the excessive lipoids. To effect these ends he administers a diet rich in protein and poor in fat: Fish, lean meat, lean ham, white of egg, oysters,

lentils, peas, rice, oatmeal, bananas, skimmed milk, coffee, tea, and cocoa; fluids 1,200 to 1,500 c.cm. (1½ to 2 pints); salt to taste. Starchy foods are limited in order to promote the maximum assimilation of proteins and to lessen the retention of water. Fat is limited to lessen the amount of lipoids.

We have found this diet to be most efficacious in reducing nephritic oedema, and, further than this, it has resulted in a very marked improvement in the patient's general condition and in reducing the amount of albumin in the urine.

A FAMILIAL FORM OF ACOUSTIC TUMOUR.

BY

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TUMOURS of the acoustic nerve or nerves have been reported in medical literature occasionally for many years. They have usually been included under the head of "tumours of the cerebello-pontine angle." It is largely due to the work of Cushing that the acoustic tumours proper have been clearly differentiated from other tumours in this region, and he has been the first to point out their characteristic course and symptomatology. He estimates acoustic tumours to form 6 per cent. of all intracranial growths, and over 20 per cent. of those of the posterior fossa of the skull. Histologically, the isolated tumours of the acoustic nerve arise from the endoneurium; their structure, according to Cushing, consists of two kinds of tissue—a dense fibrous tissue and a looser areolar tissue, possessing some of the characters of a glioma. Bilateral tumours, however, are commonly part of a general tumour formation, which may affect many nerves—in fact, a general neurofibromatosis. Such cases have been not infrequently reported. It should be noted, however, that bilateral deafness has been found to occur in cases where only one acoustic nerve was involved. Henneberg and Koch[1] were the first to point out that tumours of the acoustic nerve could form part of generalized neurofibromatosis. Oppenheim[2] remarks that he has seen eight cases where a general neurofibromatosis was masked by the symptoms of intracranial tumour.

A familial or inherited tendency has been noted in only a small proportion of the cases of neurofibromatosis. Thus Alexis Thomson[3] was able to collect but ten examples from the literature. As regards acoustic tumours proper, the available literature does not record any familial or hereditary tendency. Hence the history of the family recorded in this article is of unusual interest. None of the cases have been verified as yet by operation or autopsy, but the clinical histories and the condition of those patients who were under careful observation are so striking and characteristic, and the existence in one of them of multiple tumour formation renders the diagnosis of acoustic tumours practically certain. The chronological order of symptoms, as described by Cushing—namely, auditory and labyrinthine disturbances, headache, cerebellar ataxia, disturbance of the function of other cranial nerves and the increase in intracranial tension, with optic neuritis and failure of vision—are well exemplified in the history of the family, which is as follows:

First Generation Available.

Mary Ann B., aged 80, had three brothers and sisters, all healthy. One is still alive; the others died at a ripe age.

John B., aged 80, is deaf and too senile to answer questions intelligibly. He was one of a family of ten, of whom only one sister survives. Several died young, but no details have been obtained except concerning *Susan*, who died, aged 39, of an illness lasting a few years, accompanied by headache and deafness, and *Sarah*, who died, over 60, of "something the matter with her head."

Second Generation.

Mary and John B. had ten children, of whom one died in infancy; four others are alive and well. But one, Richard B., has been a patient at the Hospital for Epilepsy and Paralysis, Maida Vale (see below). He is now in a Poor Law infirmary, bedridden, totally blind and deaf. Another, John B., died at the age of 30 after an illness of over two years' duration. He complained first of deafness and noises in the head and was noticed to stagger in walking. Some five months after the onset of his illness he was sent to the Exeter Hospital, where he remained for a month or two. On his return his sight was failing, and he eventually became quite deaf and blind, although for some time he could walk with support. No history of vomiting or headache was obtained, but his friends and relations had noticed a swelling in the neck about the size of a hen's egg for many years. He died about two years after leaving the hospital.

Elisabeth B. died at the age of 33 after an illness of two years' duration. The chief symptoms noticed by the relations were unsteadiness of gait, deafness, and progressive blindness. She was for a time an inmate of the Exeter Hospital and was considered to be suffering from a cerebral tumour. Operation was suggested but refused.

Susan B. died aged 29. Her illness began in somewhat the same way, but she died suddenly from a "stroke."

George B. died aged 52 after an illness of some years' duration, which was accompanied by deafness, blindness, and an unsteady gait.

Third Generation.

Richard 2nd, son of John 2nd, has lately been a patient at the Hospital for Epilepsy and Paralysis, Maida Vale (see below). He has multiple neurofibromata.

William, his brother, states that at one time he had some lumps about his body, but that they faded away. He looks upon himself as foredoomed to die in the same way as others of his family. At present he has no symptoms.

The following is a more detailed account of two members of the family who were recently under the care of one of us at the Hospital for Epilepsy and Paralysis, Maida Vale.

CASE I.

Richard 1st, aged 41, was admitted on July 1st, 1919, under the care of A. F., complaining of deafness, headache, and inability to walk properly. He was then so deaf that it was impossible to obtain from him any accurate history, but one of us (E. W.) had previously seen him, and was able to supply the following history. He first came under observation with suspected pulmonary tuberculosis in October, 1913, but made a good recovery, and by October, 1917, the disease had evidently become arrested. In October, 1918, he complained of headache and weakness of the legs. From January to February, 1919, he was in a sanatorium, but was sent home as his symptoms were entirely nervous in origin. In April, 1919, he was found to be suffering from headache, chiefly occipital in site, and to be getting deaf. His gait was then slightly unsteady, with a tendency to fall to the right. By May, 1919, he had become very deaf, the headache was worse, and he had begun to vomit occasionally. Vision had become defective. The gait was markedly ataxic. The pupils were unequal, the left being larger than the right, and there was well marked double optic neuritis. Nystagmus was present. On admission to hospital in July, 1919, the condition was as follows:

He suffered from a severe and continuous headache, chiefly localized to the occipital region on the left side. There was complete bilateral deafness. The pupils were equal in size and reacted normally. Examination of the fundi showed well-marked double optic neuritis, with much swelling of both discs. Nystagmus was present in all directions, but was more marked when the eyes were directed to the left. With the exception of slightly diminished sensation in the area of the first division of the fifth nerve on the left side, the functions of the other cranial nerves appeared normal. There was no paresis of either the arms or the legs. No static tremors were present. Some slight ataxia was observed in the upper limbs on voluntary movement. The gait was decidedly ataxic, with a tendency to fall to the left. The tendon reflexes were active, the abdominal reflexes present, and the plantar responses were of the flexor type. The Wassermann reaction in the blood was negative.

A diagnosis of bilateral tumours of the cerebello-pontine angle, probably of the acoustic nerves, was made. Operation was advised but refused, and the patient left the hospital. At the present time he is an inmate of a Poor Law infirmary, where he is quite bedridden, totally blind and deaf.

CASE II.

Richard B. (son of John 2nd), aged 20, was admitted to the Hospital for Epilepsy and Paralysis, Maida Vale, on January 2nd, 1920, under the care of one of us (A. F.). As he was almost completely deaf in both ears and could neither read nor write, it was impossible to obtain an accurate history of the condition. But it appeared that deafness had been noticed to begin about nine months before and to progress rapidly. He also complained of constant roaring noises in the head. There was no head-

ache and no vomiting, and no complaint of difficulty in walking nor of giddiness.

On examination the pupils were found to be unequal in size, the right being larger than the left; the right pupil reacted briskly to light and accommodation; the left pupil was contracted, slightly irregular in shape, and reacted only very sluggishly to light. There was no nystagmus and no ocular paralysis. The fundi were normal. With the exception of the deafness the functions of the other cranial nerves were not disturbed in any way. There was practically complete bilateral nerve deafness. He was examined by Mr. Muecke, who considered that the nerve conduction from the labyrinth was almost completely blocked on both sides, more so on the left.

There were no other signs of disease in the central nervous system. But there were present three subcutaneous tumours whose characters suggested that they were fibromata or neurofibromata. These were exceedingly interesting and important in view of the condition of the auditory apparatus and the family history. In the right side of the neck, underneath the sterno-mastoid muscle, was a large, rather spindle-shaped tumour, about the size of an elongated lemon, extending from the angle of the jaw nearly to the sterno-clavicular joint. It was hard, freely mobile, and quite painless. There was no evidence of surrounding inflammation and no enlargement of lymphatic glands. A second but smaller tumour was found in the subcutaneous tissues of the chest wall, just over the right costal margin in the anterior axillary line. It was about the size of a walnut, hard, irregular in shape, freely movable, and painless. A third tumour, about the size of a small date, with similar characteristics, was situated in the upper part of the left gluteal region. The patient stated that he had had these tumours as long as he could remember. The smaller one, in the chest wall, was removed under local anaesthesia for histological examination. Dr. Canti reported that it showed the structure of a soft fibroma. It is more than likely, however, that it arose from a nerve sheath, since it is not easy to demonstrate the existence of nerve tissue in these neurofibromata which have been present for a long time. Operation on the skull was not advised.

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THE OPERATIVE TREATMENT OF ULCERATIVE COLITIS.

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THE discussion on ulcerative colitis which took place at the Royal Society of Medicine in 1909 first revealed the importance of the disease both as regards its prevalence and commonly fatal consequences. Since then our knowledge of it has advanced considerably, but chiefly in respect of the epidemic forms rather than the sporadic chronic cases which are more common in this country.

Very little advance seems to have been made in the diagnosis and treatment of the truly chronic ulcerative forms. There are many reasons for this, one being that the chronic cases have proved almost a complete failure from the point of view of bacteriological investigation. In a large number of cases the stools have been investigated by most competent bacteriologists, but so many different micro-organisms are found, and the difficulties of deciding which is responsible for the disease are so great, that no useful information is, as a rule, obtained. My own experience has been that, with one or two conspicuous exceptions, bacteriology has been of little assistance.

Medical treatment also has not been very successful except in the mild cases, though here I must admit I may be prejudiced by the fact that as a surgeon I am more likely to see the cases in which medical treatment has failed.

Some of the worst cases of ulcerative colitis are those in which the chronic condition is secondary to an acute epidemic form such as amoebic or bacillary dysentery. There is a certain similarity between these cases and the ordinary form of chronic phthisis. In both we find an acute specific infection causing lesions which become secondarily infected with other septic organisms, and it is this latter secondary infection which causes much of the trouble.

These cases of chronic ulcerative colitis are particularly important at the present time, because very large numbers of men have been infected with acute dysentery while fighting at different parts of the front during the last five years, and are now suffering from the chronic and often much more serious condition.

Not only have a large number of these cases returned to this country during the last eighteen months, but quite a considerable number of cases have occurred among men who have never left England, and among women. These latter cases do not start with acute amoebic dysentery, but are chronic from the beginning. I have little doubt, however, that they have in many cases become infected from the class of cases first mentioned. This is rather borne out by the fact that several cases of ulcerative colitis which came under my observation last year came from one seaport town where many troops from abroad were landed.

A typical case would be that of a man who contracted acute dysentery in Africa or Arabia during the war and had been more or less successfully treated at the time, but the diarrhoea has recurred subsequently until it has become almost continuous, and he has gradually begun to go downhill with constant liquid blood-stained stools, progressive loss of weight, failure of appetite, etc.

An examination with the sigmoidoscope (the value of which in these cases as a means of diagnosis does not even yet appear to be fully appreciated) shows deep and extensive ulceration of the mucous membrane of the rectum and colon. In a bad case islands of mucous membrane can be seen standing up from the ulcerated surface, presenting an appearance closely resembling a polypoid condition.

Examination of the stools show numerous bacteria, mostly of the *coli* or streptococci groups, but no sign of protozoa.

The clinical history of cases of ulcerative colitis varies considerably. In those cases in which the disease is not secondary to acute dysentery the condition often starts insidiously. The patient appears to recover satisfactorily from the initial attack, but recurrences become more and more frequent and less amenable to treatment, until the condition becomes so serious that no treatment seems to have any effect. It is generally at this stage that the surgeon is called in.

There may sometimes be confusion between chronic ulcerative colitis and other forms of chronic recurring diarrhoea, but this can at once be cleared up by an examination with the sigmoidoscope. In true ulcerative colitis the temperature is almost always raised 1° to 2° F. at night. Blood is more or less constantly present in the stools, and wasting is a marked feature of the case.

The best treatment for ulcerative colitis is appendicostomy, and I have seen very many really desperate cases recover as a result of this operation, which I and those associated with me were certain must otherwise have died. Unfortunately the surgeon is too often only called in when the patient is already very seriously ill and the ulceration has become very extensive. The operation should be performed at a much earlier stage of the disease, and recovery would be then much more rapid and more certain.

In true ulcerative colitis non-operative treatment appears to be of very little use. Even when recovery does occur it is a slow and tedious process. One of the reasons for this is that the ulcerated surface is very large and cannot be directly dealt with. Douches and enemas cannot be tolerated in sufficient quantities to ensure that they reach the whole of the diseased area.

Appendicostomy acts in two ways. The first and most important action is to allow of the large ulcerated area being kept clean and free from pus and accumulated discharge. The frequent washing of the colon by removing the products of inflammation allows the ulcers a chance to heal, and to a large extent prevents the absorption of septic by-products into the blood.

The second important action is to compensate for the great loss of body fluid, which is always present owing to the constant diarrhoea. Many of these patients are wasted till they are little more than skin and bone, and it is often quite remarkable to see the improvement that follows

frequent irrigation of the colon through an appendicostomy opening.

As already stated, the proper time to perform appendicostomy is as soon as the condition has been diagnosed; but in practice it has been my experience that the surgeon is usually not called in until medical treatment has been tried for months and failed. Then when appendicostomy is suggested it is argued that the patient is in such a poor condition that he will not stand the operation. This is, however, not the case, as the operation can quite well be performed under local anaesthesia without running any risk at all.

In a bad case the patient should after the operation be treated by continuous saline irrigation for six or eight hours at a time. This is easily arranged by using a metal bed-pan with a tap and a rubber tube attachment. Very careful nursing is, however, necessary to prevent the formation of bedsores.

As soon as the diarrhoea has been checked and improvement has set in, a 3 or 4 pint wash through twice or three times a day will be sufficient. On no account should any antiseptic be added to the fluid used for irrigation, as poisoning symptoms are almost sure to result. Solutions of silver nitrate or protargol can be used, but in the case of the former only for a short time. I have seen a very bad case of staining of the skin with silver which resulted from frequent washing through with silver nitrate. Salt water seems to give the best result in most cases.

There still are people who think that an appendicostomy opening is an objectionable thing and that it results in the escape of gas and faeces. This is, of course, not the case with a properly made opening. In ulcerative colitis the opening should be kept patent for at least six months after all symptoms have subsided, but after this it may be allowed to close, which as a rule it will readily do.

CONCLUSIONS.

1. Chronic ulcerative colitis is a very serious and often fatal disease.
2. The best treatment is by frequent washing through with saline solution after an appendicostomy opening has been established.
3. The operation should be performed as soon as a diagnosis has been made and not left as a last resort, although it may sometimes succeed even then.
4. The diagnosis should always be confirmed by sigmoidoscopy.

FIBROIDS COMPLICATING PREGNANCY: HYSTERECTOMY: RECOVERY.

BY

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PREGNANCY with fibroids of the uterus, especially subserous ones, is, of course, not uncommon, but a case which I have recently had to deal with presented somewhat unusual features, and showed what a remarkable condition may be associated with a normal menstrual history and pregnancy, in the early months.

A healthy nullipara of 38, from whose mother I had, by the way, removed an ovarian cyst and subserous fibroid some years ago, had been married fourteen months, and the menstrual periods, which had always been perfectly regular and normal, had ceased for four and a half months. She had had some morning sickness, and the breasts were enlarged and tender. Pregnancy had therefore been diagnosed, but no suspicions of abnormality aroused. I was sent for on account of troublesome vomiting for two days, constipation, and sharp abdominal pain.

A rounded movable tumour, about the size of a fetal head, was felt in the upper abdomen as high as the ensiform cartilage. It was attached below to what appeared to be a pregnant uterus reaching well above the umbilicus, irregular in shape, and unduly high up. On vaginal examination the pelvis was found to be occupied by a large fixed firm rounded mass lying between the rectum and vagina, and displacing the uterus upwards, so that the cervix could only just be reached round the front of the tumour. A diagnosis of fibroids complicating pregnancy was made, and operation advised, as, owing to the size and position of the tumours, symptoms suggestive of commencing pressure, and the risk of degeneration and infection, it seemed unsafe to wait for viability of the child.

The patient was brought into a nursing home; an enema produced a fair result, the sickness and pain ceased; her general condition was good. A catheter, passed with a little difficulty, showed no distension of the bladder.

Operation.

In the Trendelenburg position, under ether, skilfully given by Dr. A. Simpson with Shipway's apparatus, an incision was made from the pubes to well above the umbilicus. A gravid uterus was revealed, covered with subserous fibroids of all sizes; many were small, but from the fundus grew two large pedunculated masses, each the size of a fetal head. These were delivered from the wound with the uterus. On lifting the viscus forward sharp haemorrhage occurred from the posterior part of the cervix, where it was attached to the pelvic tumour. There were many large veins, and everything was very vascular. The bleeding could only be controlled by pressure with pads, for it took place from a considerable torn surface in dense tissue, and no vessels could be secured. Efforts to bring up the pelvic mass, which was extra-peritoneal, by traction with strong vulsella, helped by the pressure of an assistant's fingers in vagina and rectum, failed. In view of the risk of meeting with uncontrollable bleeding if further attempts were made to remove the pelvic block, hampered as one was by the presence of the bulky uterus, it was judged that the right course was to diminish its size and vascularity, at the cost of the child. Pituitrin was therefore injected, the uterus incised where it was free from growths, and the fetus and placenta removed. The edges of the incision were clamped together, and haemorrhage quickly arrested. In spite of the advantage now obtained it seemed impracticable to save the uterus, and a subtotal hysterectomy was performed, the ovaries being spared. On the right side a small dermoid cyst, intimately adherent to the pelvis, was encountered, but left to be dealt with if necessary subsequently. The peritoneum over the pelvic fibroid was now freely divided and separated off, and the tumour brought up with the vulsellum sufficiently to give room for the fingers being worked down and round it, gradually enucleating it from its bed, a watch being kept for the ureters. No definite connexion with the cervix could be identified. Haemorrhage was readily arrested, all peritoneal edges brought together with catgut sutures, and the abdomen closed.

The patient made an uninterrupted recovery, and was back at home in three weeks.

The case was of special interest to me in connexion with Dr. Herbert Spencer's Lettsomian lectures. Dr. Spencer states that he has never found it necessary to remove a uterus in the early months of pregnancy, and expresses the opinion that the practice of hysterectomy in this condition is much too common, but I believe the difficulties encountered in this case justified what I did.

Instead of panhysterectomy, subtotal hysterectomy was performed, as the position of the cervix made it easier; nor did I split the cervix for drainage, as Sir John Bland-Sutton suggests, as all looked so dry and tidy that I was tempted to leave it.

On section the tumours presented the ordinary appearance of myomata, no "red degeneration" being observed; but the pelvic fibroid showed signs of fibrocystic change. This, Dr. Herman states, is often associated with rapid growth, which presumably was the case here.

PHAGEDAENA OF HUNTERIAN CHANCRE

FOLLOWING TREATMENT WITH NOVARSENOBENZOL.

BY

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IN both these cases there was bacterial infection of the Hunterian chancre. In both chancre, bacteria, and the "reacting" tissue became more or less completely shut up together by the very effect of the reaction on the tissues around the chancre.

CASE I.

A labourer, aged 39, six weeks after coitus, noticed a painless lump on the under side of the penis, and three days later a "running," thin at first, then thicker. During the ensuing seven days he noticed slowly increasing discharge and difficulty in passing water, but had no pain. He denied previous gonorrhoea or chancre.

Examination showed a thick yellow discharge from meatus, and, on micturition, thin, twisted, interrupted stream. On the ventrum of the penis, in the line of the urethra, about 4 cm. from the meatus, could be seen and felt a dull red, hard mass, 1 by 0.5 cm., not tender, apparently including the urethra. The inguinal glands on both sides were large, hard, and discrete. There was no rash. No attempt was made to pass instrument.

Pending the result of laboratory investigation, irrigation of the anterior urethra with 1 in 4,000 potassium permanganate solution daily was ordered.

The Wassermann reaction was negative. Smears from the meatal pus (Gram and Fontana-Tribondeau) revealed staphylococcus in pure culture and numerous *T. pallidum*, but no other micro-organisms.

When the patient was seen again, three days later, the only appreciable change in the local condition was easier micturition, the stream, still very thin, being continuous; 0.3 gram of novarsenobenzol was injected intravenously at 4 p.m. The patient returned at 5 p.m. next day; he stated that he had noticed no effects at all from the injection, until on rising that morning he had experienced great difficulty—"just a drop at a time"—in passing water, and the lump on the penis was larger and redder. He had gone to work, but had been unable to micturate all day, and was now in great pain. The temperature was 102.4° and the pulse 96. There was redness and oedema of the prepuce, especially the ventral portion, but no discharge from urethra. The lesion on the under side of the penis had become a hot, deep-red, semi-fluctuating tumour, its apex soft and purple; the whole mass was continuous with the ventral portion of the inflamed prepuce. The dorsum penis was apparently unaffected, except that a hard mass in the mid line, 1 cm. long, could be felt through its thickness at the level of the ventral lesion. Exploration with fine gum-elastic bougies showed an impassable stricture about 4 cm. from the meatus.

At 6.30 p.m. general anaesthesia was induced; the whole apex of the tumour was gangrenous. Circumcision was done and all the sloughing tissue removed. Stinking pus escaped and the gangrene was found to extend to a fistula into the urethra. Distal to this fistula the lumen was completely closed by the hard, inflamed urethral wall, a sort of solid cylinder of hard chancre. In smears from the pus only staphylococcus was found. Twenty-four hours after the operation a No. 6 gum-elastic bougie could be passed easily from the meatus along the urethra and through the fistula. Healing was rapid; the fistula closed in three weeks. Later injections of novarsenobenzol produced no ill effects; five days after operation 0.6 gram was injected intravenously; seven days later the Wassermann reaction was definitely positive.

CASE II.

A seaman, aged 26; fourteen days previously while at sea had sore, first noticed as small painless pimple on the penis; this was about seven weeks after coitus. He denied previous gonorrhoea or chancre.

Examination showed redness and oedema of the prepuce, which, with a little difficulty, was retracted to expose the ulcer (2 by 1 cm.) on the mid dorsum of the glans; the raw surface did not quite reach the corona. The base of the chancre was formed by raised red granulations, spotted with small grey sloughs; the edges were heaped, hard, rounded, sloping into the ulcer and into glans tissue. In front and at the sides induration extended for about ½ cm. into the glans tissue; it continued above over corona into the sulcus and inner surface of the prepuce, in this last situation giving a cartilaginous feel, the plaque flicking over on its edge. No part of the lesion presented any of the characters of a soft chancre, nor were any ulcers detected elsewhere on the glans or inner surface of the prepuce. Urethritis was not present. In both groins were large hard discrete glands. There was no rash.

Circumcision was suggested; more cannot be said, for it was not pressed against the patient's reluctance to submit to operation. Pending the result of laboratory investigation, irrigation of preputial sac daily with 1 in 4,000 potassium permanganate was ordered. Smears from chancre (Fontana-Tribondeau) revealed mixed bacteria and numerous *T. pallidum*. No other micro-organisms were detected. The Wassermann reaction was doubtful.

Three days later 0.3 gram novarsenobenzol was injected intravenously at 4 p.m. The patient was seen again at 11 a.m. next day (nineteen hours after the injection); he had noticed no ill effects. There was great increase of the oedema and redness of the prepuce; with great difficulty, however, retraction was possible sufficiently to expose the chancre and corona glandis. The ulcer itself appeared clean, without sloughs, but much swollen and a darker red. The glans tissue around was swollen, very red, and patched with purple blotches—a bruising effect. The Jarisch-Herxheimer reaction was diagnosed, and in the expectation that the local condition would now rapidly improve, irrigation of the sac was repeated and the patient told to return next morning. Alarmed, however, by the size of the penis and by blood escaping from the preputial opening, he stayed in bed "to rest it." He appeared at the clinic at 3 p.m., scared and in great pain. The temperature was 103° and the pulse 110. The swelling and redness of the prepuce were now extreme, and from the opening dripped blood; retraction was possible only so far as to expose the edge of a loose grey slough overlying the meatus.

Under general anaesthesia circumcision was performed. A grey-black, stinking slough replaced the whole of the glans down to the urethra, all the corpus spongiosum being destroyed except the corona glandis, a buttress on each side of the urethra, and a thin "washer" of tissue, including the meatus. The urethra was intact.

No further destruction occurred; granulation was rapid under eusol baths and wet dressings. The circumcision wound healed quickly, no chancroids appearing on its cut edges. The inner surface of the excised prepuce was carefully examined, but showed no sign of ulceration anywhere.

Seven days after the first injection the Wassermann reaction was found to be definitely positive.

Further treatment by novarsenobenzol caused no ill effect.

It seems reasonable to conclude that the effect of the "reaction" is to damage still further the chancre tissue already damaged by the treponema. Deeper invasion of the tissue may then readily ensue by the bacteria already present in the chancre, and, the whole being shut up together, phagedaena results.

Not to labour the obvious moral of Case II, I confess I should have operated on almost any one of the four days before that on which, in fact, the operation was performed.

A CASE OF CERVICAL CARIES SIMULATING CEREBELLAR TUMOUR.

BY

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IN an exhaustive paper published in *Brain*, Part xcvi, 1901, Taylor and Collier drew attention to the occurrence of optic neuritis associated with lesions of the cervical cord, and showed that both headache and vomiting of cerebral type may occur with such lesions. The following case appears to be of interest as an example of this association, and indicates the very great importance of accurate diagnosis, for, whereas the treatment of cervical caries is essentially conservative, if an intracranial tumour be present operative procedures often hold out the only, albeit slender, hope of successful treatment.

History.

A boy, aged 7 years, was admitted to the children's ward of Charing Cross Hospital for stiffness of the neck which had lasted about three months. His mother stated that for two months he had walked as if paralysed, and had frequently fallen. He often complained of headache, particularly in the back of the head, and occasionally vomited, the vomiting being unassociated with the taking of food. A week before admission to hospital he developed a squint in the left eye.

Condition on Admission.

A slight, pale child, preferring to lie quietly in bed, he was usually drowsy, but when roused was conspicuously intelligent and docile. The head was held rigid and erect in the mid-line and definitely increased tonus of both trapezii and both sterno-mastoids was present, notwithstanding which movements of flexion and extension of the head and lateral movements were free and unaccompanied by pain. The boy's action when stooping to pick up a coin from the floor was stiff and awkward and strongly reminiscent of spinal caries, and when he was first seen in the out-patient department a tentative diagnosis of caries of the cervical spine was made.

Condition under Observation.

On more thorough examination well marked optic neuritis, estimated at over two dioptres of swelling, was found in both eyes; pupillary reactions were normal. All reflexes were present but difficult to obtain; no evidence of altered sensation could be found, but the seven cardinal signs of a cerebellar tumour of the left side were each in turn elicited and became more marked during the fortnight that the case was under observation, namely:

1. Inco-ordination of movements of the left arm and hand as compared with the right, dysdiadochokinesis of the left hand.
2. Bárány's test of deviation to the left on pointing with closed eyes to a stationary object a succession of times was obtained.
3. Tendency in walking to lean and to deviate to the left side—not definitely marked while crawling on all-fours.
4. Left hypotonia affecting both arm and leg.
5. Muscular weakness on the left side, particularly of the left arm.
6. The head was slightly asymmetrical in shape, the left occipital region being fuller than the right.
7. The attitude of the head, though not characteristic, was consistent with the presence of a left cerebellar tumour encroaching on the mid line.

The radiographer's report on a skiagram of the head and neck was to the effect that no evidence of spinal caries was present. No abnormality could be detected in the posterior fossae of the skull. There was no dysphagia, and nothing could be seen in the throat. In the absence of any definite indication a digital examination of the pharynx was not made, nor was a pharyngoscopic examination attempted.

Operation.

Symptoms and physical signs were in favour of cerebellar tumour, and this view was confirmed by others who examined the case. The progress of symptoms and increasing optic

neuritis indicated the need for operative interference, and subtentorial decompression by the Cushny method, combined with exploration of both lobes of the cerebellum, was performed by Mr. Norman C. Lake. On incision of the dura there was no gush of cerebro-spinal fluid to indicate increased tension, and both lobes were pulsating normally; the left, although more prominent than the right, was otherwise normal. Regrettably death occurred from respiratory failure just as the operation was successfully completed.

Post-mortem Examination.

Nothing abnormal was found in the brain to account for the optic neuritis, and there was no evidence of increased intracranial pressure. A retro-pharyngeal abscess was found behind the anterior common ligament, embracing the bodies of the third and fourth cervical vertebrae and communicating by a fistula with a cavity in the centre of the fourth cervical, from which the abscess had extended into the spinal canal and had caused pressure on the adjacent spinal cord. There were tuberculous lymphatic glands in the neck.

Despite the unfortunate termination of the case, it is difficult to see what other diagnosis could have been made on the basis of the observations recorded above.

The diagnosis of cervical spinal caries made when the case was first seen was given up with some reluctance, and the suggestion tentatively advanced that two separate lesions were present, respectively intracranial and intrathecal, but this in turn was surrendered in view of the apparently overwhelming evidence in favour of cerebellar tumour.

The case, however, affords an admirable example of how closely lesions of the upper cervical cord, especially at the level of the third cervical segment, may simulate intracranial tumour; it possesses the further interest of occurring in a child aged 7 years, the youngest in Taylor and Collier's series being a girl of 15.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF ENCEPHALITIS LETHARGICA.

R. R., aged 18, who had never had any previous illness, nor any discharge from the ear, nor nasal catarrh, played football on October 25th. That night he had a shivering attack and headache. He stayed in bed next day (Sunday). When I saw him on October 27th he complained of headache, chiefly in the left parieto-temporal region; the temperature was 102° F. As he continued in this state and was slightly lethargic, I sent a specimen of his blood for examination, thinking he might be suffering from typhoid fever, but it was returned "definite negative." He continued in the same condition another week. As he got more heavy and drowsy, and the tongue was thickly coated, the blood was sent again for examination, with the same result. At this time, about fourteen days from the commencement of the illness, a rotheln-like rash appeared on the body and limbs, and lasted several days. There was some bronchial catarrh at both bases; the temperature varied between 101° and 103°. The pulse was 55 to 60. The pain was still very severe, affecting chiefly the left side.

About November 14th he had slight left ptosis, and dilatation of the pupil on the same side. For about a week vomiting was very troublesome. On November 16th lumbar puncture was performed; the fluid was clear and under slight pressure. Dr. Davies, M.O.H. for Bristol, kindly reported that there was no excess of polynuclear cells and no meningococci in the film, and that on cultivation meningococci and other organisms were not grown; reducing substances were present in normal amount, and the globulins were not increased. There was no retraction of the head, and Kernig's sign was not present. The temperature about this time came to normal, and except for two days remained so for the rest of the illness.

About November 20th he had a well marked right-sided convulsion lasting several minutes. He was still distinctly lethargic; he objected very much to the light. I now thought it might be a case of encephalitis lethargica, and I asked Dr. Charles, of Clifton, to see him with me in consultation. The patient was better on this day than he had been for some time. Dr. Charles agreed with the diagnosis; he also noticed slight right facial paralysis. It had not been present on the previous day; on the following day it was worse. On November 25th there was partial paralysis of the left arm and left leg. The knee-jerks were absent. About this time he became aphasic. Early in December he developed paralysis of the soft palate, and had great difficulty in swallowing; for two days he took nothing, but this gradually passed off. For several days he had repeated attacks of spasmodic contraction of both arms, got very red in the face, and perspired over the forehead. He was now lying in a completely lethargic condition; cerebration was very slow; when asked to put out his tongue, after about four seconds the tongue would slowly come out. Both pupils were very dilated.

On December 23rd he had a general convulsion, and afterwards was completely blind. On January 1st he was very lethargic, control of sphincters was lost, and emaciation was becoming marked. He remained in this condition until January 17th, when he had repeated attacks of spasmodic contractions of both upper extremities, the legs not being affected. He died the same evening after nearly three months' illness. The trained nurse who looked after him aptly described it as a "living death." As far as treatment was concerned I tried hexamine but it seemed to have no effect; so very little seemed possible beyond nursing and feeding. A stained specimen of the blood appeared normal. The discs were a little pale but otherwise normal; the urine was normal. No *post-mortem* examination was obtained.

Bristol. MAURICE C. BARBER, M.B., Ch.B.

PNEUMONIC HAEMORRHAGIC EFFUSION INTO PLEURA.

THE case described here is sufficiently rare to make it worth recording.

A single woman, aged 32, had been attended by me early in March, 1919, for a mild attack of influenza followed by slight icterus. From this she recovered completely. On April 26th I was sent for urgently; she had had a rigor, and the temperature was 104°. She was very ill; the pulse was 108. Respirations were normal, and no physical signs could be detected. That night the temperature dropped to 100.6°. For the next three days it was irregular, gradually rising to 103.4° on April 29th. The pulse was never very rapid and did not rise beyond 106. On this day the respirations were 26. During this time marked dullness became manifest over the lower portion of the right lung with general signs of consolidation. On April 30th she appeared so ill that I got Dr. Carey Coombs to see her with me. An exploratory needle was passed into the dull area, but the syringe filled quickly and easily with pure blood. Dr. Scott Williamson, pathologist, who examined this, reported that it was pure blood containing pneumococci, and expressed the opinion that probably the lung was infected with the pneumococcus and had been penetrated by the needle. The temperature now became hectic, never rising above 102.8° in the evening; respiration ranged from 28 to 32 and the pulse from 116 to 136. As there were no signs of the lung clearing up, on April 12th an exploratory needle was again used, and a few drops of blood stained serum drawn off.

Her general condition continued to deteriorate, and on April 17th I drew off 1 drachm of thin pus. On April 18th Dr. Coombs again saw the patient with me, and, tapping more towards the axilla, 15 oz. of serum beginning to get purulent were drawn off. The next day Mr. Lansdown resected a rib, and removed, in addition to a quantity of thin purulent serum, large masses of old blood clot. From this time onwards she made an uninterrupted recovery, and now the right lung expands fairly well.

It is clear that there was pneumococcal infection, and that the lower lobe of the right lung was infected. This infection was apparently so virulent that extensive haemorrhage into the pleura took place, and it must have been some of this blood which was first drawn off. The failure to obtain more than a few drops of fluid on the two next occasions was probably due to the needle pushing the blood clot in front of it, and never entering the main effusion. The theory that the blood originally drawn off was from the pleural cavity and not the lung is strongly supported, though perhaps not absolutely proved, by the large masses of clot removed from the pleural cavity at the operation.

Wrington. HUBERT C. BRISTOWE, M.D.Lond.

SUPPURATIVE ARTHRITIS AND PERITONITIS AFTER ACUTE BRONCHOPNEUMONIA.

DURING a recent epidemic of measles I saw a girl aged 5 years with a typical attack, but with more severe catarrhal symptoms than usual. She subsequently developed bronchopneumonia, which resolved in about a fortnight.

She did not improve, and complained of pain in the left hip. There was limitation of abduction and rotation of the left thigh, the knee was flexed, and a large abscess developed over the hip-joint. I opened and cleaned out the abscess, and applied extension with a Thomas hip splint. The abscess drained well and healed quickly. The temperature, however, became irregular, and she was extremely ill, complaining chiefly of pain in the abdomen, which in a week became tense, swollen, rigid, and shiny. The temperature fell to normal and the pulse rate increased. Free fluid was recognized in the peritoneal cavity. While making preparations for a laparotomy, pus to the extent of three pints burst through the umbilicus. She made an uninterrupted recovery, and is to-day quite healthy and strong, but with half an inch shortening of the left leg.

The case is of interest in so far as the question arises, What was the origin of the arthritis and peritonitis? They may both have been tuberculous, but in neither situation were tubercle bacilli found in the pus. The rarity of purulent effusion in tuberculous peritonitis is somewhat against it being tuberculous. She had no signs of tuberculosis of the lungs, nor were there any tubercle bacilli in the sputum. In the pus from both parts pneumococci were found, and the sequelae must have been a pneumococcal arthritis and a pneumococcal peritonitis.

The latter may have been caused by a spread of infection from the lungs through the subdiaphragmatic lymph channels, but it is more probable that both conditions were of haemic origin, and secondary to the bronchopneumonia.

Wrexham. A. LLOYD DAVIES, M.B.

Reports of Societies.

EARLY RECOGNITION OF SYPHILIS.

AT a meeting of the Royal Medico-Chirurgical Society of Glasgow, held on March 19th, the PRESIDENT, Mr. A. Ernest Maylard, being in the chair, Dr. W. H. BROWN made a "plea for the early recognition of syphilis," and cited cases from the army in which the diagnosis of syphilis was not made nor effective treatment begun until eight or ten weeks from the date of the man's reporting with a venereal sore, by which time the secondary eruption had appeared. Such faulty or delayed diagnosis increased the risk of the man's spreading the disease, prolonged his treatment, and diminished his chance of complete cure. Statistics showed that the longer the delay in treatment the worse the prognosis. Thus early primary cases with negative Wassermann reaction showed after full treatment 100 per cent. of negative reactions; late primary cases, with Wassermann becoming positive, showed after treatment 75 to 85 per cent. with negative Wassermann; while secondary cases showed after treatment only 60 per cent. with negative Wassermann. The fact that the central nervous system was early affected in syphilis increased the danger of delay. As to diagnosis, every venereal sore should be regarded as possibly syphilitic until it had been proved not to be, and the possibility of syphilis should not be excluded until the patient had been under observation for two, and preferably three, months, and at the end of that time given a negative Wassermann reaction. Dr. Brown then enumerated the points to which attention must be paid for the recognition of a primary syphilitic sore. It must be remembered that a double infection might occur at the same time, and on the same or different sites, by Ducrey's bacillus and *S. pallida*. Consequently what was clinically a soft sore might, after a short incubation period, assume the characters of a syphilitic chancre after the necessary incubation period of three or four weeks; or a chancre might follow a soft sore, but on a different spot. In some cases judgement must be suspended till the aid of laboratory methods—dark-ground examination of serum from sore for *S. pallida*—had clinched the matter; there should always be close co-operation between the clinician and the bacteriologist. A large series of coloured drawings and photographs was shown in illustration of the appearances described.

Clinical Cases.

Dr. WILLIAM RANKINE reported two cases of ruptured jejunum.

1. A man, aged 19, who had fallen from a scaffold, landing on his abdomen, presented no external abrasion, but was collapsed and in great pain, with a very rigid abdomen. Operation a few hours later revealed an almost completely transverse tear of the jejunum, which was sutured. Patient was dismissed well on the twenty-second day.

2. A man who, having fallen down the hold of a ship and struck some beams in falling, presented a fracture of the crest of the ilium and blood in the urine. At operation, seven hours later, two tears were found in the upper part of the jejunum, which were sutured. Patient was seriously ill for four days but ultimately made an excellent recovery.

Dr. Rankine reported also a case of diaphragmatic hernia operated on through the pleural cavity.

The patient, a boy aged 8, had his abdomen run over by the wheel of a motor bread van, was in great pain and presented some bruising and a rigid abdomen. An exploratory incision above the umbilicus showed that the spleen and greater part of stomach had been displaced into the left pleural cavity through a large tear in the diaphragm. The abdominal wound was closed and an osteoplastic flap, including portions of two ribs in the axillary and posterior regions of the left thorax, was turned up to give free access to the pleural cavity. Through this the organs were replaced without difficulty and the tear in the diaphragm sutured.

The patient was dismissed well after twenty-five days, and when seen at the meeting (five and a half years later) showed no abnormality of the chest or lungs.

Dr. G. HERBERT CLARK reported "An undescribed condition of infancy and its treatment." The condition had been identified in two children, one of whom was now normal and the other slowly becoming so. The outstanding symptoms were idiocy, depression, fibrillary twitchings in the muscles, jerking movements of the limbs, convulsions, and inability to balance.

The first patient had been apparently normal till the age of 4 months, when the fits and startings began. When first seen, in 1910, at the age of 15 months, he had a well formed and plump body, a large head, with open anterior fontanelle, an abnormal staring and apparently unseeing condition of the eyes, and presented all the symptoms mentioned above. Examination of the electrical reactions gave inconclusive results. Neither carpo-pedal spasms, Trousseau's nor Chvostek phenomena were ever present. As the symptoms seemed to resemble those produced in animals by removal of the parathyroids, the effect was tried of feeding with thyroid gland tablets containing parathyroid as an impurity. On a dose of ½ grain twice daily the child improved rapidly, was free from fits and twitchings after three weeks, and was now absolutely normal. The tablets were continued for six months, and then gradually stopped.

The second child was a girl, who had been fairly normal till about a year old, and then began to have twitchings, startings, and convulsions, with apparent indifference to surroundings and growing depression. When first seen, in September, 1919, she was aged 2½ years, well formed, plump, with satisfactory dentition, but the anterior fontanelle not quite closed. The symptoms were similar to those in the other case. On October 16th the child was ordered parathyroid tablets, $\frac{1}{10}$ grain thrice daily; fits, startings, and twitchings at once began to diminish, and quite ceased by October 24th. The child improved in alertness, took notice of her surroundings, played with toys, and could sit up and even stand. On October 27th parathyroid treatment was discontinued, and the fits, which had been absent for five days, at once recurred with violence. By the end of the week the child was rapidly falling back into the state on admission. To ascertain the effect of thyroid gland, this was given for a week in small doses (½ grain t.i.d.) so as to exclude any effect of possibly present parathyroid, but without benefit. On November 10th parathyroid was resumed, and by the end of a week most marked improvement had taken place. This was maintained, and when seen on March 9th the child was running about, playing and trying to talk. The condition described was illustrated by numerous photographs of both children taken before, during, and after treatment.

A CONFERENCE on the prevention of diseases of the teeth will be held at Manchester on May 13th–15th. Particulars may be obtained by sending a 1½d. stamp to the Food Education Society, Danes Inn House, 265, Strand, W.C.2.

Reviews.

VISION AND COLOUR VISION.

IN the *Physiology of Vision*[1] Dr. EDRIDGE-GREEN gives us the results of researches which have been spread over thirty years, gathered together from the various scientific journals in which the original papers appeared; the whole forms a most fascinating volume, which should appeal not only to the ophthalmic surgeon but also to the general reader.

The author has had the satisfaction of seeing his views, which at first met with a good deal of opposition, now generally accepted by the majority of physiologists and ophthalmic surgeons, while his colour-testing lantern is now in common use for testing candidates for the Royal Navy, signalmen, and others. The contents of the volume can be conveniently arranged in two parts: in the first, the physiology of vision is discussed, chapters being devoted to dioptrics, accommodation, defects of the eye as an optical instrument, the action of light on the retina, the origin of visual impulses, light and dark adaptation, after-images and binocular vision; the important points are grouped together at the end of this section of the volume in a very convenient summary. The second part deals more particularly with colour vision; chapters are devoted to the sensations caused by simple and mixed lights, the simple character of yellow sensation, methods of examining the colour sense, hexachromic and heptachromic vision, colour blindness, the evolution of the colour sense, trichromic vision and anomalous trichromics, simultaneous and successive contrasts, and colour adaptation; here again the important points are summarized at the end of particular sections. The two final chapters deal with the author's theory of colour vision and with his objections to the other theories.

After describing his spectrometer, lantern, bead test, and card test, Dr. Edridge-Green insists that experiments on colour vision need as much care as those in any other branch of science, and points out how the results of experiments may be vitiated by imperfect apparatus, such as coloured papers, and by the admission of stray light. He has given in all cases the full experimental grounds on which he has based his theories, and when he has rejected the results of former experiments he has given his reasons for doing so; finally, he points out how necessary a knowledge of the laws of colour contrast is to the designer.

The author is to be congratulated on his book, which deals very ably with what is admittedly an extremely difficult subject. We imagine that the majority of his readers will agree with his deductions.

We have also received a copy of the author's *Card Test for Colour Blindness*,[2] in a neat case. The principle of this test is, that on a ground of spots of one colour a letter is formed in spots of another colour, the shape, number of spots, and relative position is the same in each of the twenty-two cards, the only way of distinguishing the spots which form the letter being a difference of colour from that of the other spots. Each card is designed with a special purpose; the colours correspond to portions of the spectrum which, when isolated, appear all of a uniform colour to a class of the colour-blind, while special cards have been designed to catch cases of shortening of either end of the spectrum. We have not yet had an opportunity of examining a case of colour-blindness with this test, but the cards appear to form a very handy and convenient addition to the armamentarium of the ophthalmic surgeon.

INDUSTRIAL MEDICINE AND SURGERY.

SCIENTIFIC management in industry has been studied with increasing vigour for many decades. At first this study concerned itself with the mechanical factors tending to increase output and with the cutting down of expenses of manufacture. Latterly, however, the working man and woman have also received the attention of scientific managers, and the attempt has been made to improve output and effect economy by studying the health of the worker, and endeavouring to keep him physically fit for his job. The special forms taken by medical and surgical practice in striving to attain this object are set out by Dr. MOCK in his large volume on *Industrial Medicine and Surgery*,[3] which is based on the author's nine years' experience as chief surgeon to one of the largest industries in Chicago. Here are correlated the demands of industrial practice, medicine, surgery, and the principles of social and economic development. The book is divided into six parts. The first outlines an industrial health service, and gives details of the aims of industrial sanitation, a branch of preventive medicine. Part II deals with the prevention of ill health and accidents in industry on broad lines. Part III gives an account of the part played by industrial medicine in works—the medical examination and treatment of the employees, with a special chapter on tuberculous workers. The fourth part is on industrial surgery, wounds, infections, fractures, *x*-ray diagnosis, and the like. Part V is concerned with compensation, insurance, and the medico-legal questions generally that arise from industrial accidents and diseases. The last part is given to reconstruction, the reclamation of the disabled to which the war has given so great and desirable an impetus.

Dr. Mock writes with the authority and conviction of wide experience, and if in some matters he seems to set his ideals rather high, and to demand an over-Prussian or grandfatherly regimentation of the workers for their good, in many others he is able to show the excellent effects that have followed the adoption of high ideals for working measures. In matters concerning the health of the individual much depends upon the attitude towards interference by the State, the employer, and the medical expert, taken up by the individual concerned.

The style is clear and shows a highly practical spirit, and in order to widen his audience Dr. Mock has made his text as free from technical language as possible. His book may be cordially recommended to the attention of medical men with an industrial practice, and still more to laymen such as employers, industrial engineers, social workers and others, who are awake to the necessity for improving the conditions under which manual labour is performed. Here they will find plenty of practical suggestions for improvements, and countless indications for the directions in which improvements must be made.

TOTEM AND TABOO.

THE study of social anthropology is a development of relatively recent growth, and though an enormous number of facts has now been collected from various sources, the theories suggested to explain the facts are by no means always convincing. Professor FREUD, in a volume a translation of which by Dr. BRILL has been published under the title *Totem and Taboo*,[4] has attempted to elucidate the origin of primitive customs by applying the results of psycho-analysis to the problems of racial psychology. Since psycho-analysis is essentially concerned with primitive impulses and regressive modes of thought in the individual, its conclusions, it is suggested, may shed some light on similar modes of thought and action amongst primitive races.

The first chapter is devoted to the question of exogamy, a marriage prohibition which has been regarded as a protective measure against incest. There are, however, difficulties in the way of accepting this rather obvious explanation; it seems to be established, for instance, that certain Australian tribes, the most primitive of existing races, do not connect the sexual act with impregnation, and believe that a woman may become pregnant by merely passing through certain forbidden places. Freud contends that this alleged incest dread is in close agreement with the psychic life of the neurotic: he reports some psycho-analytic observations offering, as he thinks, evidence as to the significance of the primitive mother-in-law prohibitions, which he suggests are more difficult to explain than those which concern near relations. In the chapter

[1] *The Physiology of Vision, with Special Reference to Colour Blindness.* By F. W. Edridge-Green, M.D., F.R.C.S. London: G. Bell and Sons, Ltd. 1920. (Demy 8vo, pp. xii + 280; 23 figures. 12s. net.)

[2] *Card Test for Colour Blindness.* By F. W. Edridge-Green. London: G. Bell and Sons, Ltd. (In leather envelope case, 25s. net.)

[3] *Industrial Medicine and Surgery.* By Harry E. Mock, B.S., M.D., F.A.C.S., Assistant Professor of Industrial Medicine and Surgery at Rush Medical College, etc. Philadelphia and London: W. B. Saunders Co. 1919. (Roy. 8vo, pp. 846; 210 figures. 42s. net.)

[4] *Totem and Taboo. Resemblances between the Psychic Lives of Savages and Neurotics.* By Professor Sigmund Freud, LL.D. English translation, with introduction, by A. A. Brill, Ph.B., M.D. London: George Routledge and Sons, Ltd. 1919. (Demy 8vo, pp. xii + 268. 10s. 6d. net.)

on taboo and the ambivalence of emotions a comparison is drawn between taboo and a compulsion neurosis, and it is suggested that "All taboo phenomena . . . become unified if we sum them up in the following sentence: The basis of taboo is a forbidden action for which there exists a strong inclination in the unconscious." This theory is worked out in considerable detail, but whether the proposed limitation of the definition of taboo can be established demands a fuller acquaintance with the subject than Professor Freud appears to possess. The parallel drawn between the psychic life and primitive customs of the savage and the mental mechanisms and abnormal impulsions of the neurotic is unsound.

In the last two essays animism, magic, and totemism are considered. While recognizing that these subjects are exceedingly complex and cover a wide range, Professor Freud appears to commit himself to the opinion that psycho-analytic studies afford suggestions as to the possible origin of these religious-social customs; his discussion of the conclusions of leading ethnologists is of doubtful value, although the industry with which he has made extracts from the voluminous literature of the subject may be commended. In closing his study on totemism Professor Freud produces his King Charles's head, concluding that the beginning of religion, ethics, society, and art meet in the Oedipus complex. This, he adds, is in entire accord with his reading of psycho-analysis—"namely, that the nucleus of all neuroses as far as our present knowledge of them goes is the Oedipus complex." But in a footnote he adds the customary ambiguous qualification:

> I am used to being misunderstood, and therefore do not think it superfluous to state clearly that in giving these deductions I am by no means oblivious of the complex nature of the phenomena which give rise to them; the only claim made is that a new factor has been added to the already known or still unrecognized origin of religion, morality, and society, which was furnished through psycho-analytic experience.

In commenting upon his conclusions it may be said that while many authorities will admit the probability that dread of incest has some relation to exogamy, the numerous theories suggested at one time or another to explain the origin of prohibitions against marriage between relatives have been so inadequate as to cause one writer to assert that they may be condensed into the simple but honest phrase, "I do not know what caused the savages to adopt the system of exogamy." Whether Freud in this book has produced an hypothesis of any real value remains to be seen. Had he been able to base it upon the mental development of children he would have been on safer ground; when he attempts to bolster it by "the reactions of neurotics" he at once excites doubt in the mind of those possessing any previous knowledge of the subject.

BLOOD PRESSURE.

TEN years ago Dr. L. GALLAVARDIN of Lyon published a monograph of 206 pages, with 70 figures, on the subject of arterial blood pressure in clinical practice, its estimation and symptomatic value; in its second edition it has now been expanded into a volume of more than 700 pages and 200 figures. In reviewing the original edition (BRITISH MEDICAL JOURNAL, 1910, ii, 20) we were able to say that it was excellent, and this verdict holds good as regards the second edition,[5] which is really a new book, and is replete with bibliographical references, including many to British and American authors. The work is divided into two main parts—on the method of blood pressure estimations, and on their clinical bearings. The account of the methods has been expanded so as to occupy more than 200 pages, and has been brought fully up to date. The auscultatory method is fully described and compared with other procedures, full justice being done to the work of McWilliam, Melvin, and Murray, published since the first edition appeared. This method has been popularized in France by Collet, Tixier, and Laubry; the last named has invented a sphygmophone enabling two persons to make simultaneous observations.

The clinical and main part of the work begins with an account of the physiological variations of blood pressure, and in connexion with the hardly perceptible blood-pressure variations attending normal respiration it is pointed out that forced respiration may cause a difference of 10 to 15 mm. Hg in the systolic and rather less in the diastolic blood pressure; a remarkable case of a healthy man who by holding his breath for a prolonged period was able to raise his systolic pressure from 110 to 230 mm. is quoted.

A useful summary is given of the current knowledge of the conditions of blood pressure in airmen, and stress is laid on the influential factors other than barometric pressure. In commencing the consideration of pathological blood pressure, the author remarks that after the value of estimating the minimum or diastolic blood pressure was established an exaggerated importance was attached to it, especially by Pachon, and that the systolic and diastolic pressure are both indispensable. An abnormally low diastolic pressure may be due to bradycardia (pseudo-hypotension), to aortic regurgitation (true low diastolic pressure), to rigid arteries without aortic reflux, and to arterio-venous aneurysm. Variations of blood pressure in various parts of the body—for example, the increased pressure in the dorsalis pedis artery as compared with that in the radial artery in cases of abdominal aortitis—are described. After a chapter on the blood pressure in various diseases, this valuable treatise, which is a storehouse of information, concludes with a section on the effects of medical treatment.

A FIELD AMBULANCE IN GALLIPOLI.

COLONEL G. H. EDINGTON has reprinted from the *Glasgow Medical Journal* a sketch of the career of the 1/1st Lowland Field Ambulance in Gallipoli.[6] It is a Territorial unit, and he was in command when it was mobilized on August 15th, 1914, when it started for Egypt on June 4th, 1915, when it landed at Helles on June 27th, and when it left Gallipoli on the final evacuation of the peninsula on the night of January 8th–9th, 1916. His account is detailed, and it is possible to follow the story of the unit almost from day to day. As is well known, the positions available afforded little or no cover, and what he has to say of the design and construction of the hospital trench at a camp on the Krithia road is of general and permanent interest; photographs of this camp are among those with which the volume is copiously illustrated. His notes give a vivid impression of the perils and discomforts, and of the difficulties under which the medical work was conducted. Colonel Edington states that the Turks respected the Red Cross, at the beginning at least, for later on aeroplanes were less discriminating. Living in close contact he learnt to know and appreciate the good qualities of all ranks, and he concludes his book with the following words: "The outstanding features were the undaunted cheerfulness with which all faced every danger and discomfort, and the unfailing fidelity with which they discharged whatever duty came their way. These things are surely a just reason for pride; the memory of them stands out as a bright spot, which will for me always illumine the darkness of Gallipoli."

NOTES ON BOOKS.

IN *The Scientific Authority for Total Abstinence, Part II*,[7] Dr. C. C. WEEKS has reprinted in a pamphlet six articles from the *Journal of the Royal Army Temperance Association*, together with an interesting appreciation of the late Sir Victor Horsley. In language which is suited to the understanding of an intelligent layman, careful and accurate general descriptions are given of the nervous system, and the effects of alcohol thereon are discussed briefly, with sincerity and moderation of tone.

The chief subjects treated in the issue of *Medical Science*[8] for April, 1920 (the first number of the second volume, and the first issued by the Medical Research Council), are the typhoid fevers, pneumonia, and syphilis. There is a note on the nervous lesion caused by beri-beri

[5] *La tension artérielle en clinique. Sa mesure, sa valeur séméiologique.* Par Docteur L. Gallavardin. Deuxième édition. Paris: Masson et Cie. 1920. (Roy. 8vo, pp. xii + 717; 200 figures. Fr. 30 net.)

[6] *With the 1/1st Lowland Field Ambulance in Gallipoli.* By Colonel G. H. Edington, M.D., D.Sc., A.M.S.(T.F.). With illustrations Glasgow: Alex. Macdougall. 1920. (Med. 8vo, pp. 72.)

[7] *The Scientific Authority for Total Abstinence, Part II: Alcohol in Relation to the Nervous System, with special reference to its Action on the Brain.* By Courtenay C. Weeks, M.R.C.S., L.R.C.P., Captain R.A.M.C., lately Vicar of St. Hilda's, Crofton Park; General Secretary, Royal Army Temperance Association, 47, Victoria Street, S.W.1. (Price 6d.)

[8] Published for the Medical Research Council by the Oxford University Press. Annual subscription 21s.; a single number 2s.

in which the view that it is due to toxic polyneuritis is upheld, and the opinion of Vedder and McCarrison that the essential lesion is a degenerative change in the cells of the central nervous system is rejected. There is also an article on decapsulation and nephrotomy for nephritis in which a very cautious opinion is expressed as to the value of the former method of treatment. An index to first volume is printed with this issue.

Professor RICHET'S lectures to French Red Cross helpers, which we were able to praise when first published in his own language, have now been translated into English and published in a small volume entitled *War Nursing*.[9] It is particularly adapted to the needs of educated women who wish to know something about the principles of nursing. The lectures are full of sound information, informal, not over-practical: the work of a famous scientist who has grown old in the study of physiology. We may all congratulate ourselves that the urgent demand that called them into being is now no more. The translator has done her work excellently.

The Third Great Plague,[10] by Dr. J. H. STOKES, contains a temperate discussion of syphilis, and the social problems to which it gives rise, for everyday people. The other two great plagues, it may be noted, are tuberculosis and cancer. The subject is treated adequately from all points of view, and Dr. Stokes writes clearly and with knowledge. His book may be recommended to laymen who wish to learn what syphilis is and how its spread may be limited.

In *War Diseases and Pensions*,[11] Drs. R. M. and W. T. WILSON have supplied medical referees, general practitioners, and those who sit on medical boards to adjudicate pensions, with a serviceable little manual of practical points in the diagnosis of such things as D.A.H., neurasthenia, trench fever, malaria, and the degree of disability present, that should be of great utility in matters of assessment. The snare of diagnosis based on symptoms is well displayed, and the importance assumed by laboratory diagnoses in patients with various chronic infections is sufficiently insisted upon. We recommend this unassuming book to the attention of those for whom it has been written; it is not, of course, exhaustive in its treatment, but it contains valuable and practical advice.

[9] *War Nursing.* What Every Woman should Know. Red Cross Lectures. By Charles Richet, Professor in the University of Paris, etc. Translated by Helen de Vere Beauclerk. London: William Heinemann. (Fcap. 8vo, pp. xi + 120. 3s. 6d. net.)

[10] *The Third Great Plague.* A Discussion of Syphilis for Everyday People. By John H. Stokes, A.B., M.D., Chief of the Section of Dermatology and Syphilology, the Mayo Clinic, Minnesota, etc. Philadelphia and London: W. B. Saunders Co. (Post 8vo, pp. 204.) 6s. 6d. net.

[11] *War Diseases and Pensions.* By R. M. Wilson, temporary Captain R.A.M.C., M.B., Ch.B., and W. M. T. Wilson, late temporary Captain R.A.M.C., M.B., Ch.B. London: H. Frowde, and Hodder and Stoughton. 1919. (Fcap. 8vo, pp. 71. 3s. 6d. net.)

THE MEDICAL RESEARCH COUNCIL.

PROVISIONS OF THE CHARTER.

THE Medical Research Council has been brought into existence by Royal Charter to replace the Medical Research Committee established to administer the Medical Research Fund provided by a paragraph in the first Insurance Act, which directed that a sum calculated at the rate of one penny for each insured person should be retained for purposes of medical research out of moneys provided by Parliament. The Committee ceased to exist on March 31st and the new Council came into existence on the following day.

The change is consequent on a proviso of the Ministry of Health Act, 1919 (Section 3, Subsection (1), proviso (i)), which directed that the duties of the Medical Research Committee should be transferred to a Committee of the Privy Council. The transfer has taken place and the Medical Research Council has been constituted to carry out these duties under the Committee of the Privy Council recently established, as noted a fortnight ago. This Committee consists of the Lord President of the Privy Council, the Minister of Health, the Secretary for Scotland, and the Chief Secretary for Ireland. In the absence of the Lord President the Minister of Health will preside. The constitutional position of the Medical Research Council is thus defined and its duties are formally shown to extend to all parts of the United Kingdom.

The Charter of the Medical Research Council, approved at a Council held by the King on March 25th, appoints the first Council, as set out below. It provides that two members shall always be members of the House of Lords and of the House of Commons respectively, and that any vacancy among the other members, whether casual or due to expiration of the term of office, shall be filled after consultation with the Medical Research Council and the President for the time being of the Royal Society.

CONSTITUTION OF MEDICAL RESEARCH COUNCIL.

The first Medical Research Council is constituted as follows:

Viscount GOSCHEN, C.B.E.
Mr. WILLIAM GRAHAM, M.P. (Edinburgh Central).
The Hon. E. F. L. WOOD, M.P. (Ripon, North Riding).
C. J. BOND, C.M.G., F.R.C.S., Consultant Surgeon, Leicester Royal Infirmary.
WILLIAM BULLOCH, M.D., F.R.S., Professor of Bacteriology in the University of London (London Hospital).
T. R. ELLIOTT, C.B.E., D.S.O., M.D., F.R.S., Physician to University College Hospital, London.
HENRY HEAD, M.D., F.R.S., formerly Physician to the London Hospital.
F. GOWLAND HOPKINS, M.B., D.Sc., F.R.S., Professor of Biochemistry in the University of Cambridge.
Major-General Sir W. B. LEISHMAN, K.C.M.G., C.B., M.B., F.R.S., Director of Pathology, Army Medical Service.
D. NOËL PATON, M.D., F.R.S., Regius Professor of Physiology in the University of Glasgow.

POWERS.

The Charter creates the Medical Council a body corporate, with the usual powers of a chartered body, to hold and dispose of money or other personal property received for medical research from Parliament or from other sources. It is empowered to hold and to accept gifts and bequests of land and buildings in the United Kingdom to an amount not exceeding in annual value £50,000.

The members of the Council will hold office for two years, but will be eligible for reappointment. The members named in the Charter will hold office until September 30th, 1921, when three will retire; thereafter three members will retire at intervals of two years.

The Council will elect its own Chairman, Treasurer, and Secretary. The first Secretary is Sir Walter Fletcher, M.D., D.Sc., F.R.C.P., F.R.S., hitherto Secretary of the Medical Research Committee. The Council may appoint other officers, and remunerate them and expend such moneys for administrative purposes as it thinks fit, subject to the approval of the Committee of the Privy Council above mentioned.

Another clause gives the Medical Research Council power to alter, amend, or add to the Charter by a vote of two-thirds of the members present and voting (being an absolute majority of the whole number of the Council) subject to confirmation by a like majority at a subsequent meeting. Honoraria, subject to the approval of the Committee of the Privy Council, may be paid to members of the Medical Research Council not being members of either House of Parliament.

ROYAL MEDICAL BENEVOLENT FUND.

ANNUAL MEETING.

THE annual meeting of the Royal Medical Benevolent Fund was held on Tuesday, March 16th, with Sir CHARTERS SYMONDS, K.B.E., in the chair.

The annual report for the year ending December 30th, 1919, showed that there had been an increase of £196 in donations and subscriptions over the previous year, and that the total amount distributed on the grant account was £2,532.

Attention was drawn to the fact that owing to the increased cost of living it was necessary to increase the amount of the grants, and that at least an additional £1,000 was required for this purpose; as only about 7 per cent. of the medical profession support the Fund, the Committee expressed the hope that this sum would be forthcoming. The annuitants numbered 178. The War Emergency Fund has distributed £8,540. At the last meeting of the Committee of that Fund grants amounting to £800 were made to seven of the applicants. This Fund will be pleased to consider applications from demobilized R.A.M.C. officers with the view of assisting them to re-establish themselves in their practices.

Sympathetic reference was made to the death of the late President, Dr. Samuel West. Sir Thomas Barlow, Bt., K.C.V.O., M.D., was elected President, Sir Charters J. Symonds Honorary Treasurer, and Dr. G. Newton Pitt Honorary Secretary. The members of the Committee of Management were elected. Votes of thanks were passed to the retiring officers and to the Editors of the BRITISH MEDICAL JOURNAL and *Lancet* for their great help during the past year. Donations and subscriptions may be sent to the Honorary Treasurer at 11, Chandos Street, Cavendish Square, London, W.1.

EIGHTY-EIGHTH ANNUAL MEETING

OF THE

British Medical Association,

CAMBRIDGE, 1920.

EVOLUTION OF THE MEDICAL SCHOOL

*(continued).**

By the year 1700 all the natural sciences had obtained a footing in the University. Caius, the first recorded practical scientist of Cambridge, had established anatomy in 1558; but anatomy in his time was not fully emancipated from the bonds of traditional authority; it included most of the physiology then known or imagined, and doubtless still held to some absurdities which unprejudiced observation would have cleared away. Glisson in 1636 had introduced the new or philosophical anatomy and physiology, infused with the spirit of Harvey, and guided by the principles of Roger Bacon, as expounded by his namesake Francis, Lord Verulam. Ray had introduced systematic botany, and his intimate friend and collaborator, Francis Willughby, of Trinity College, had carried out extensive investigations in animal morphology, and attempted a classification of animals. Newton was living at Cambridge from 1661 till 1727, pursuing and teaching physical science and astronomy. Chemistry was a favourite subject for private study, and the distinguished chemist Vigani was imported from Italy to lecture on the science from about 1680 onwards. Finally, geology, then an embryo science, was brought to Cambridge in 1695 by John Woodward, M.D., who (being then 30 years old, and having already completed his medical education) was in that year enrolled as a member of Pembroke College, and subsequently bequeathed his collection of specimens to the University, with a sum of money to found a lectureship in geology. His fossils were the beginning of the Geological Museum, and his lectureship afterwards became the Woodwardian Professorship.

SIR ISAAC NEWTON.
(From the engraving by J. Smith, after Kneller's portrait.)

Thus it will be seen that in 1700 the time was ripe for a fuller recognition of natural science in the University curriculum. The first-fruit was the elevation of Vigani in 1703 to a professorship in chemistry, and the provision for him of a laboratory, in which Stephen Hales shortly afterwards carried on important experiments in physics and physiology, as mentioned in our previous article. The next event was the creation of a professorship of anatomy in 1707. Anatomy had recently been taught by James Keill, who had studied medicine at Edinburgh and Leyden, and was admitted M.D. at Cambridge in 1705. But the choice for the first professorship fell upon George Rolfe, who was said to have performed several dissections "summa cum laude in usum studiosae juventutis optimum." In 1716 a building, a portion of the block which housed the University Press, at the corner of Silver Street and Queens' Lane, was assigned to the professors of anatomy and chemistry for their laboratories.

In 1723 Parliament considered and rejected a clause in an Act "for the better enabling the Faculty of Physick, in the University of Cambridge, to take the bodies of Persons executed for Felony and other Crimes, for Anatomical Dissections." Public prejudice was still strongly against dissection. It may have been partly through the difficulty of obtaining bodies that the enthusiasm of Rolfe failed, and he became so inactive that after long warning the University in 1728 deprived him of his appointment.

Meanwhile in 1724 the professorship of botany was created. The first tenant of the chair, Richard Bradley, F.R.S., was the author of works on botany and agriculture, but (like Rolfe) was negligent as a professor. His neglect was remedied by permission to lecture being given to John Martyn, F.R.S., who in 1727 gave the first course in botany that was read in Cambridge. Martyn entered at Emmanuel in 1730, and in 1733 succeeded Bradley as professor.

No other new development took place for several years, but some contemporary events deserve notice.

One of the most honoured names in Cambridge is that of John Addenbrooke, Fellow of St. Catharine's, who was admitted M.D. in 1712, and died in 1719 at the early age of 39. He probably practised in Cambridge, and may have taught pharmacy, but on both these points evidence is wanting. At all events he was interested in pharmacy, and made a collection of teaching specimens of *Materia Medica* which is still in possession of his college. He also in his short life earned (if he did not inherit it) sufficient money to leave £4,000 to found the first public hospital in Cambridge. The building of the hospital was delayed nearly fifty years by litigation; and meanwhile the endowment was augmented with a further sum of £7,000 by John Bowtell the bookseller. The hospital building has since been greatly enlarged, but it is always called "Addenbrooke's Hospital," and the name of Bowtell is prominent in its interior. May their names never be dissociated from it!

Another name, whose fame has extended far from Cambridge, is that of William Heberden, who entered St. John's in 1724, became Fellow of the College, graduated M.D., and practised and lectured on *Materia Medica* in Cambridge for ten years, and then removed to London.

Interesting information on the state of natural science

* Previous articles in this series of descriptive and historical notes on the University and town of Cambridge have appeared in the JOURNAL of January 3rd, p. 17; January 24th, p. 125; and March 13th, p. 369.

in Cambridge about this time has been preserved for us by Samuel Dale of Bocking in Essex, physician, distinguished botanist, dilettante in most of the arts and sciences, and intimate friend of Ray. He paid several visits to Cambridge between 1722 and 1738, and kept a diary of them, which is preserved in the Cambridge University Library. This diary, consisting of notes without embellishment jotted down for his own use only, is of considerable historical value.[1] It appears from his notes that botany was a popular study among the residents.

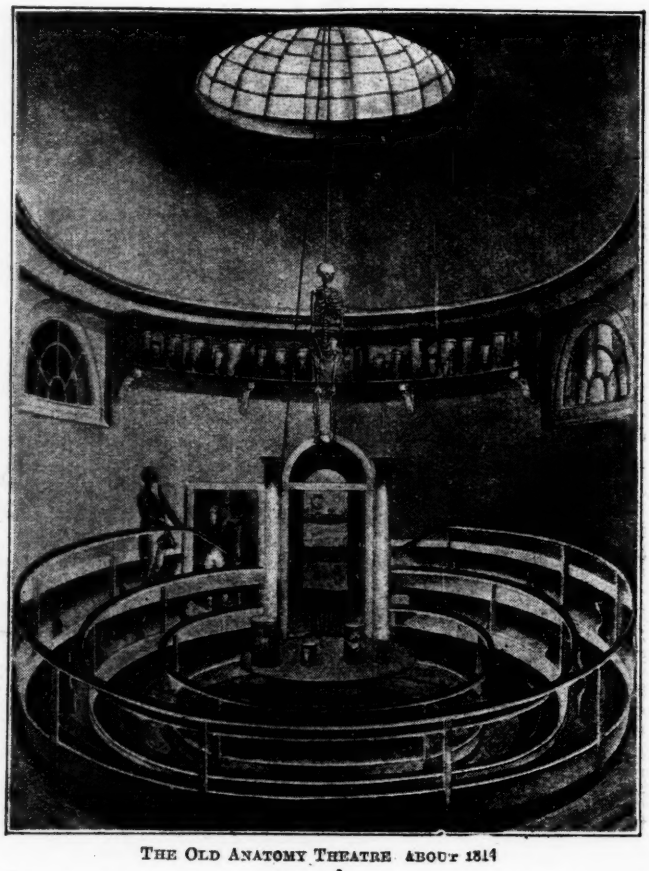
"The connection between botany and medicine," says Professor Hughes, "was then much closer, as simples formed a large part of the pharmacopoeia of that day. It would appear that Dr. Dale regarded the subject very much from that point of view, because so many of the plants he mentions were used in medicine. His friends [at Cambridge] gave him roots and seeds, and helped him to find others." . . . "It is mentioned that Dr. Martyn [the second Professor] laboured much to bring this science into repute, read public lectures for several years, and perambulated the country with his scholars, showing them the Cambridgeshire plants where Mr. Ray had described them to grow."

In 1737 Dale was introduced to a Mr. Jackson, who mentioned—

"That Mr. Martyn had shewn him a New Methodus Plantarum by a German named Lineus which much differ'd from that of Mr. Ray."

In Mr. Davis's rooms at Queens' (probably Dr. Richard Davies, to be mentioned again later) he saw, in 1735, "Hawksby's Pneumatick Engin," mentioned in the *Transactions* of the Royal Society. This was possibly an air-pump. In 1737 he

"went to see Mr. Wilson, who dwells over the Greate Gatehouse [of Trinity]; he shewed me the observatory, in which is a clock that goeth one month. It was the present of Sir Isaac Newton to the University. They correct it by the Sun and have in that room divers large tellescops and other Mathematical Instruments, together with a double barrelled Pneumatick machine in that room and that under it, and above all in the Cupulo is a large sextile fixt, with two tellescopes."



THE OLD ANATOMY THEATRE ABOUT 1814

We further learn from Dale's diary that Dr. Woodward's collection of fossils, in four cabinets, were already housed in a separate room in the University Library in 1730, two years after Woodward's death, and were under the care of Mr. Mason, who shortly afterwards succeeded to the Woodwardian Professorship.

Dale's picture of Cambridge shows the natural sciences in general very much alive and rejoicing in their youth. But how were the specially medical sciences doing? We have mentioned that the first professor of anatomy was inactive and had to be deprived of his office. His successor, John Morgan, was apparently more energetic or less scrupulous, for during his time (1728–1737) body-snatching was more prevalent in the neighbourhood than usual, and public indignation became serious. In 1731 the University passed an ordinance for the punishment of any student or graduate found guilty of participation in the stealing of bodies.

"The prohibition," says Dr. Alexander Macalister,[2] "does not seem to have been effectual, for on the 2nd of April, 1732, a body exhumed from a neighbouring churchyard was traced into Emmanuel College, and the pursuers obtained a warrant from a magistrate, Mr. Pern, to search for it. . . . However, the body was too carefully concealed to be found by the searchers."

It is not clear whether this body snatching was owing to insufficiency or to total failure of the supply of bodies to which the school had a legal right. Whatever the cause, the custom continued, leading many years later to a remarkable incident—the dissection of the body of Laurence Sterne in the anatomy theatre of his own university. It was in 1768, the professor at the time being Charles Collignon. Sterne's body had been buried at St. George's Burial-Place at Tyburn (now Bayswater Road) and had been brought to Cambridge on the following day. One of his friends, invited to see the dissected body, recognized his face. Thus Yorick's grave was dishonoured like that of his namesake. It was believed that his skeleton was preserved in the Museum; but Professor Macalister was unable to identify even his skull. Though dissection was being carried on, it was only with difficulty, and meanwhile neither the professors of anatomy nor those of physic achieved anything remarkable — even personal fame. Certain other doctors gave lectures on medical subjects, among them Robert Glynn of King's College, physician to the poet Gray.

In March, 1750–1, Glynn announced a course of lectures on the Medical Institutes, in three parts:

Part I. On the Animal Oeconomy.
Part II. On the Operations of Medicines.
Part III. On the History of Diseases.

In March, 1752, he further announced "A Course of Medical Lectures on the Structure and Use of the Principal Organs of the Human Body. . . . The First Course 2 Guineas—The Second Course, 1 Guinea."[3]

That the state of medical teaching was not satisfactory is indicated in a letter addressed by Richard Davies, M.D., of Queens' College (whose name was mentioned in Dale's diary), to Dr. Stephen Hales, the experimental physicist, in 1759.[4]

In it he says: "The Arts subservient to Medicine have no appointments to encourage teachers in them. Anatomy, Botany, Chemistry, and Pharmacy, have been but occasionally taught; when some person of superior talents has sprung up and has honoured the University by his first display of them there, before his passage into the world." Provided that the university course were supplemented by due attendance at some public hospital, which ought to be the finishing school of the clinical physician, he thought that no place was so well fitted for the early training of physicians as the English universities, on account of their discipline—if only the professors' lectures had not become a farce, those positions being looked upon as dignities rather than offices.

In 1762, three years after the date of Davies's letter, a long-felt want was supplied by the gift of the first botanical garden to Cambridge, through the munificence of Richard Walker, D.D., Vice-Master of Trinity College, an enthusiastic botanist often mentioned in Dale's diary. The land chosen was the former site of the Augustinian Friary, near the middle of the town. It is said that Thomas Martyn, who had recently succeeded his father as

[1] See paper by Professor McKenny Hughes, "Dr. Dale's Visits to Cambridge, 1722–1738," in *Proc. Cambridge Antiquarian Society*, No. lxviii, 1915–16, p. 95.

[2] Lecture delivered January 29th, 1891, on the opening of the new Anatomical Lecture Room. Published by Cambridge University Press.

[3] See *Scholae Academicae*, by Christopher Wordsworth (not the bishop), to which work we are much indebted for information concerning Cambridge men and manners.

[4] *Scholae Academicae*, p. 177.

professor of botany, first taught the Linnean system in 1763; if that was the case, there was great delay in the adoption of the system, for Dale recorded (see above) that John Martyn, the father, was already acquainted with the system in 1737, twenty-six years earlier.

In 1783 the Rev. Richard Jackson of Trinity College founded the Jacksonian Professorship of Natural Experimental Philosophy, and wisely ordered that the lectures were to be illustrated with practical experiments, chemical and otherwise. It is amusing to note that the professors were requested "to have an eye more particularly to that *opprobrium medicorum* called the gout." In those days the natural sciences were mostly regarded as accessory to medicine; and are they less so now? The writer attended the lectures of the Jacksonian professor in the seventies; and though he does not remember the mention of *gout* or any other medical term, he learnt from demonstration several fundamental physical and chemical principles which have since proved of great value to him in medical science.

The first really efficient professor of anatomy, who left a permanent impression on the school, was Sir Busick Harwood, M.D., of Christ's and Emmanuel Colleges. He was professor of anatomy 1785–1814, and also Downing professor of medicine 1800–1814.

"He took a wide view of his subject—the Professorship is one of Anatomy, not of Human Anatomy—and lectured and demonstrated on the lower vertebrates, some of which having yielded up their anatomical secrets on the dissecting-table during the morning, were said to have reappeared upon his table at the mid-afternoon dinner of the period."[5]

"Shortly after his election he commenced the publication of a large work on Comparative Anatomy, but, not receiving sufficient encouragement, one part only was published, that on the organ of smell. It is a matter of regret that the project fell through, for the part issued shows originality and erudition, and is beautifully illustrated. It was translated into German, and published under the editorship of Wiedemann. To Harwood we owe the foundation of our anatomical museum, as he prepared a series of specimens to illustrate his lectures, and the University purchased them at his death."[6]

THE MUSEUM OF ANATOMY, OR ROTUNDA, BUILT 1832.

J. Palmer Clarke] [*Photo, Cambridge.*

Soon after his appointment the Anatomical Laboratory in Silver Street was rendered more convenient by the removal of the chemical department to a building at the Botanic Garden, where provision was made for the botanical, chemical, and Jacksonian professors. This gave Harwood an opportunity to fit up the building adequately. In Ackermann's *History of Cambridge*, published in 1815, the year after Harwood's death, is a print of the interior of Harwood's theatre, from which the illustration we give is a much reduced copy.

The print shows a round room, lighted from the roof, having three tiers of seats round a central table. A skeleton hangs from the ceiling. On the table are three glass jars of different sizes: one of them contains a fetus, another a twin monster. On a shelf are twenty-two similar glass jars containing specimens. Through an arch at the back is seen the museum in perspective, with mounted specimens and more glass jars.

In short, the drawing represents a well-appointed anatomical department, and confirms the written testimony as to Harwood's efficiency as a professor. If the other departments of medical science had been as well organized as his, and the several departments co-ordinated under a central management, the medical school might have taken its proper place among the schools of the time; but this was not to happen for another half-century.

[5] Sir A. E. Shipley in *A Memoir of John Willis Clark*, p. 263. Smith, Elder, and Co. 1913.

[6] Professor A. Macalister, *Lecture on the Opening of the New Anatomical Lecture Room*. Cambridge University Press, 1891. The specimens purchased by the University are said to have been wax models made in Italy. The real anatomical preparations were probably presented by Harwood.

Harwood's contemporary in the Regius Chair of Physic was Sir Isaac Pennington, M.D., Fellow of St. John's. He had been Professor of Chemistry from 1773 to 1793, and was Regius Professor of Physic from 1793 to 1817. He appears to have been an able man and to have helped with Harwood to form the anatomical museum, presenting to it in 1804 a collection of specimens.

An anecdote is told of these two knights—Sir Busick and Sir Isaac—the founders of the *real* medical school, which has the merit of fixing their names on the memory. Pennington, meeting Harwood one day, greeted him with "Good-morning, Sir B–u–sick?" To which Harwood replied, "Sir I–sic? I never was better in my life!"

Harwood was succeeded in 1814 by John Haviland, M.D., Fellow of St. John's, who passed to the Regius Professorship three years later, on the death of Pennington, and held the chair until 1851. Haviland was the first professor who gave regular courses on pathology and the practice of medicine, and he did much to make medical examinations real and satisfactory.[7]

When Haviland passed from the chair of anatomy to that of physic, in 1817, he was succeeded as Professor of Anatomy by William Clark, M.D., Fellow of Trinity College, who held the professorship for forty-nine years. He did more for his department than any of his predecessors.

"Conscious that the teaching of anatomy, more especially of comparative anatomy, in which rather than in human, he was particularly interested, could not be carried on without a collection, Professor Clark added largely to the nucleus of Harwood's Museum. He procured from Italy a number of anatomical models in wax, purchased a number of specimens from Brookes's Museum, and the whole of the collection made by Professor Macartney of Dublin."[8]

This unusually valuable collection, consisting of more than 2,000 specimens, had been refused by the authorities in Dublin; it was then offered to Dr. Clark, who most willingly induced the University of Cambridge to secure it at the price of £100 a year for ten years.

With the combined collections of Harwood, Pennington, Clark, and Macartney, a larger museum building was required, and in 1832 the collections were moved to a new building in Downing Street. The most conspicuous portion, standing at a street corner, was sometimes called the Rotunda. Though plain, it arrested attention by its form, and internally it was rather well fitted for its purpose, having two stories (floor and gallery) of shelves and glass cases, and a central table. Adjoining were the dissecting room and a theatre, the latter being no better than Harwood's, if as good.

Clark's work, with the assistance of that of Haviland, prepared the ground for the great development of the Medical School in the last third of the century. Haviland was succeeded in 1851 by H. J. H. Bond, M.D., of Corpus Christi. During the professorships of these three men all the natural sciences prospered and increased in popularity. A new botanical garden, adjoining the Trumpington Road, outside the town, was laid out in 1847, and the transference of the plants from the old garden completed in 1852. This left the site of the old garden free for the expansion of the botanical, chemical, and anatomical laboratories and museums which had been built beside it; and in course of a few years many new buildings were erected on the garden site, including a separate museum for the zoological and comparative anatomical collections.

Meanwhile the Natural Science Tripos was instituted in 1851, this being the culmination of the scientific movement in Cambridge, and acting as a great stimulus to

[7] *Historical Register of the University of Cambridge.*

[8] Professor A. Macalister, *loc. cit*

medical science. On the retirement of Clark in 1866, Dr. G. M. Humphry was appointed Professor of Anatomy, and in 1872 Dr. G. E. Paget succeeded Bond as Regius Professor of Physic. It is to these two men (afterwards Sir George Humphry and Sir George Paget) that we chiefly owe the present prosperity of the Medical School, and our next article will deal with their work and influence.

HONOURS.

A SPECIAL Supplement to the *London Gazette*, dated March 30th, contains the following promotions in and appointments to the civil division of the Order of the British Empire for services in connexion with the war:

K.B.E.

Isaac Bayley Balfour, LL.D., M.D., D.Sc., F.R.S., Professor of Botany, University of Edinburgh, Regius Keeper of Royal Botanic Gardens, Edinburgh.

Major James William Beeman Hodsdon, C.B.E., M.D., F.R.C.S., Member of Medical Advisory Board, Ministry of National Service.

Brevet Lieut.-Colonel David Wallace, C.M.G., C.B.E., M.B., F.R.C.S., Organizer and Consulting and Operating Surgeon, Dalmeny House Auxiliary Hospital; Red Cross Commissioner and Military Inspection Officer to Auxiliary Hospitals.

Brevet Colonel Arthur Lisle Ambrose Webb, C.B., C.M.G., Director-General of Medical Services, Ministry of Pensions.

C.B.E.

Francis Charles Abbott, M.S., F.R.C.S., Commandant and Surgeon in Charge, Red Gables Auxiliary Hospital, Bletchingley. Robert Craig Ackland, M.R.C.S., L.R.C.P., Medical Officer, Red Cross Hospital for Facial Injuries, Brook Street, London.

Lieut.-Colonel Sir James Barr, LL.D., M.D., F.R.C.P., F.R.S.E., County Director of Auxiliary Hospitals and Voluntary Aid Detachments in West Lancashire. Robert Cunyngham Brown, O.B.E., M.D., Deputy Director-General of Medical Services, Ministry of Pensions.

William Murray Cairns, M.D., C.M., Medical Officer in Charge, Myrtle Auxiliary Hospital, Liverpool. Richard Caton, LL.D., F.R.C.P., M.D., Chairman, Nursing Service Committee, Liverpool Branch, British Red Cross Society. Colonel William Coates, C.B., V.D., D.L., M.R.C.S., L.R.C.P., Chairman, East Lancashire Branch, British Red Cross Society. John Edwards Cresswell, M.B.E., M.B., B.C., excellent work as Principal Medical Officer, Government Hospital, Suez.

Frederick William Edridge-Green, M.D., F.R.C.S., Member of Medical Board, Ministry of National Service. Evan Laming Evans, M.D., F.R.C.S.

Thomas Ashton Goodfellow, M.D., Medical Officer of Lawnhurst (Didsbury) Military Hospital, and of Didsbury Lodge Auxiliary Military Hospital. Alfred Milne Gossage, M.D., F.R.C.P., Senior Medical Assessor, Soldiers Pension Awards Branch, Ministry of Pensions. Alexander Granville, C.M.G., M.R.C.S., L.R.C.P., Commissioner for Egypt, Palestine and Syria, British Red Cross Society. Walter Spencer Anderson Griffith, M.D., F.R.C.S., F.R.C.P., Chairman of Council, H.R.H. Princess Beatrice's Hospital War Supply Dépôt, St. Marylebone. Charles Nixon Groves, M.D., B.Ch., Civilian Medical Officer in Charge of the Darell Military Hospital.

John Howell, M.B., F.R.C.S., Consultant Surgeon, Cheltenham Auxiliary Hospitals, Honorary Secretary, Medical Committee, Cheltenham. Edmund Henry Howlett, F.R.C.S., professional medical services at the Royal Naval and St. John V.A.D. Hospitals, Hull.

Robert William Johnstone, O.B.E., M.D., F.R.C.S., Commissioner of Medical Services, Ministry of National Service. David Rocyn Jones, M.B., C.M., Deputy County Director of Auxiliary Hospitals, Monmouthshire.

James Rutherford Kerr, Ch.M., Medical Officer in Charge of the Pilkington Special Orthopaedic Hospital, St. Helens.

William Laird, L.R.C.P., L.R.C.S., Director of Glasgow Orthopaedic Annexe.

Edmund Distin Maddick, O.B.E., F.R.C.S.E., The Scala Theatre. John Howard Mummery, M.R.C.S., L.D.S., Dental Surgeon, Maxillo Facial Hospital, Kennington.

George Palmerston Newbolt, M.B., F.R.C.S., Operating Surgeon, Myrtle Auxiliary Hospital, Croxteth Hall and Royal Southern Hospital, Liverpool.

Richard Alfred O'Brien, M.D., Director, Wellcome Physiological Research Laboratories.

John Fletcher Porter, M.B., J.P., a Director of Medical Services, Ministry of Pensions.

Howell Rees, M.R.C.S., L.R.C.P., J.P. George Augustus Roberts, F.R.C.S., Medical Officer and Surgeon to Winchester Red Cross Hospitals. James Robinson, L.R.C.P., L.R.C.S., J.P., Chairman, Executive Committee, Welsh National Hospital. Frank Mortimer Rowland, M.D., B.Ch., Assistant County Director and Honorary Treasurer, Staffordshire Branch, British Red Cross Society; Medical Officer, Freeford Hall Auxiliary Hospital.

Major Arthur de Winton Snowden, M.D., B.C., Senior Physician, British Red Cross Hospital, Netley. George Alexander Sutherland, M.D., F.R.C.P., valuable services to the Air Ministry.

William Washbourn, L.R.C.P., M.R.C.S., Medical Officer in Charge, Colchester Auxiliary Hospital. Dawson Williams, M.D., F.R.C.P., D.Sc., Editor, BRITISH MEDICAL JOURNAL, valuable services to the Royal Army Medical Corps throughout the war.

O.B.E.

Edward William Adams, M.D., Medical Officer, Ministry of Health. Herbert William Allan, M.R.C.S., L.R.C.P., Medical Officer, Red Cross Hospital, The Cedars, Wells, Somerset. Frederick Leigh Angier, M.R.C.S., L.R.C.P., Senior Medical Officer to the Wigan Division, British Red Cross Society. The Rev. John William Arthur, M.D., Leader, Church of Scotland Mission, British East Africa. William Ashford, M.R.C.S., L.R.C.P., Commandant and Medical Officer, Topsham Auxiliary Hospital.

Llewelyn Arnold Baiss, M.R.C.S., L.R.C.P., Commandant and Medical Officer in Charge, Cluny Auxiliary Hospital, Swanage. Alfred Ernest Barclay, M.D., Assistant County Director, Kersal and Broughton Division, British Red Cross Society, Organizer of four hospitals. Edgar G. Barnes, M.D., County Director, Auxiliary Hospitals and Voluntary Aid Detachments, Jersey. Leonard Stewart Barnes, M.R.C.S., L.R.C.P., Medical Officer, Knebworth Auxiliary Hospital. William Richard Bates, L.R.C.P., L.R.C.S., Medical Officer, Ilkley Convalescent Home. David Leslie Beath, M.R.C.S., L.R.C.P., Medical Officer, St. John's Voluntary Aid Hospital, Newton Park and Kingswood, Bath. Alexander Clarke Begg, M.D., Ch.B., Medical Officer, Brynmill Red Cross Hospital, Swansea. Frank Belben, M.B., Medical Services, Christchurch Auxiliary Hospital, Hampshire. Major Harry Poole Berry, M.B., M.R.C.S., T.D., Medical Officer, Red Cross Hospital, Grantham. Henry Bott, V.D., L.R.C.P., M.R.C.S., Senior Medical Officer, Syon House Auxiliary Hospital; Vice-Chairman, Middlesex Voluntary Aid Organization. Francis Carr Bottomley, M.D., Medical Officer, Bodorgan Road Auxiliary Hospital; Organizer of Hospital Transport, Bournemouth. Henry Briggs, D.Sc., M.B., F.R.C.S., Technical Adviser on the Medical Stores Committee, War Office. Major Frank Brightman, M.R.C.S., Assistant County Director, Thanet Division; Medical Officer, Fairfield V.A.D. Hospital, Broadstairs. Herbert Henry Brown, M.D., F.R.C.S., Medical Officer, Broadwater Hospital, Ipswich, Maryland Hospital, Sproughton, and East Suffolk and Ipswich Hospital. Henry William Langley Browne, M.D., F.R.C.S., LL.D., J.P., Medical Officer, West Bromwich Auxiliary Hospital. Lieut.-Colonel Harry Munyard Brownfield, Medical Services, Clayton Court Auxiliary Hospital, East Liss, Petersfield, Hampshire. James Marr Brydone, M.B., B.C., Resident Medical Officer, Michie Hospital, Queen's Gate, London. William James Storey Bythell, M.D., Honorary Medical Officer, East Lancashire Disabled Sailors' and Soldiers' Homes, Manchester.

William Calwell, M.D., M.Ch., Medical Officer, Craigavon Neurasthenic Hospital, Belfast. George Arthur Cardew, M.R.C.S., V.D., Medical Officer in Charge, St. John Auxiliary Hospital, Cheltenham; Chairman Cheltenham Medical Committee. Eustace George Carter, L.R.C.P., M.R.C.S., Medical Officer, Gledhow and Roundhay V.A.D. Hospitals. Walter Chapman, M.B., B.Ch., Commandant and Medical Officer, Totnes Auxiliary Hospital. Louis de Bylandt Christian, M.B., C.M., Senior Medical Officer in Charge, Auxiliary Military Hospital, Percy House Schools, Isleworth. Thomas Archer Colt, L.R.C.P., M.R.C.S., Medical Officer and Commandant, Branksmere Auxiliary Hospital, Southsea. John Galwey Cooke, M.B., B.Ch., Principal Surgeon, City and County Infirmary, Londonderry. Harold Merriman Cooper, M.B., Senior Medical Officer, Hanworth Park Auxiliary Hospital, Middlesex. Charles Cotton, F.R.C.P., M.R.C.S., Assistant County Director, Canterbury Division British Red Cross and Order of St. John; Deputy Commissioner, St. John Ambulance Brigade for Kent. Francis Ward Crossman, M.B., B.S., Medical Officer in Charge, Cleve Hill Auxiliary Hospital. Edward Cuffey, M.B., M.Ch., Principal Medical Officer, British Hospital, Port Said. Frederick Curtis, F.R.C.S., L.R.C.P., Surgeon in Charge Redhill War Hospital, Merstham Auxiliary Hospital, and Redhill Curative post.

Arthur Vernon Davies, M.B.E., M.B., Assistant County Director, Order of St. John of Jerusalem, East Lancashire. James David Davies, M.R.C.S., L.R.C.P., Medical Officer, Hazelwood Auxiliary Hospital and Quarr Abbey Hospital, Ryde, I. of W. Charles Chatterton Deane, M.D., J.P., County Director, Red Cross and Order of St. John, co. Armagh. Clarence Reginald Dearden, L.R.C.P., Medical Officer, Red Cross Hospital, Stanwell Road, Penarth, Glamorganshire. Robinson Simpson Dickson, M.D., C.M., Senior Medical Officer, Auxiliary Military Hospital, "Tottenhall," Palmers Green. John Frederick Gordon Dill, M.D., Medical Officer to several Red Cross Hospitals in Brighton and Hove. Lionel Graham Dodds, M.D., Ophthalmic Surgeon, Buenos Aires. Miss Mary Janet Dodds, L.R.C.P., L.R.C.S., in charge of Scottish Churches Huts, Dreghorn Camp. Edward James Domville, L.R.C.P., M.R.C.S., J.P., services in connexion with the Royal Devon and Exeter Hospital. George James Dudley, M.R.C.S., L.R.C.P., Commandant and afterwards Medical Officer, Studley Court Auxiliary Hospital, Stourbridge.

Percy Edwards, M.R.C.S., L.R.C.P., Member of Advisory Medical Board, Ministry of National Service.

William Walter Fenton, M.D., Medical Officer, Red Cross Hospital, Wincanton, Somersetshire. Herbert Henry Folker, M.R.C.S., L.R.C.P., Deputy Commissioner of Medical Services, Ministry of National Service. Alfred George Francis, M.B., F.R.C.S., valuable services on Recruiting and Pensions Board,

East Central Region. Harvey Francis, M.D., Medical Officer in Charge, Arnot Hill Hospital, Nottinghamshire. George Ernest Fryer, M.R.C.S., L.R.C.P., Medical Officer, Wibbersley Hospital, Flixton, Lancashire. Willoughby Furner, M.D., F.R.C.S., Medical Officer and Administrator, Auxiliary Hospital, Third Avenue, Hove.

Alexander Rudolf Galloway, M.B., C.M., Specialist Member of Medical Boards in Scotland, Ministry of National Service. Samuel James Gilfillan, M.B., Medical Superintendent, London County Asylum, Colney Hatch. Alexander Stewart Gordon, M.D., late Naval Surgeon and Agent, Rosyth, Admiralty. George Robert Gordon, M.D., B.Ch., Medical Officer, Britannia and Hartley College Hospitals, Whalley Range. Edwin Collier Green, M.R.C.S., L.R.C.P., Assistant County Director, South Derbyshire Branch, and Honorary Secretary, Derby Borough Division, British Red Cross Society; Head of War Hospital Supply Dépôt, Derby. Alfred John Gregory, M.D., B.S., valuable medical services to the troops. George Arthur Grierson, M.B., C.M., in medical charge of officers' wards and medical wards, Military Hospital, Grimsby.

Robert Mills Hall, M.B., C.M., Senior Medical Officer in Charge, Enfield Auxiliary Hospital. Cecil Morgan Hendriks, M.B., Medical Officer, Bicester Auxiliary Hospital, Oxfordshire. Cecil Mackenzie Hewer, F.R.C.S., Medical Officer, Claveley Hall and Willington Hall Auxiliary Hospitals, Tarporley, Cheshire. Edward Septimus Earnshaw Hewer, F.R.C.S., Medical Officer, Clopton War Hospital, Stratford-on-Avon. Alex Hill, M.D., Principal, University College, Southampton. Joseph Squier Hinnell, M.D., Medical Officer and Honorary Oculist, Suffolk Hospital, Ampton Hall, and West Suffolk General Hospital, Bury St. Edmunds. Alfred Hooper, M.D., Civilian Medical Officer at Aircraft Acceptance Park, Coventry. George Henry James Hooper, M.D., M.R.C.S., Commandant and Medical Officer in Charge, Benfleet Hall Auxiliary Hospital, Surrey.

Gwilym Prosser James, M.R.C.S., Medical Officer, Kelvin Red Cross Hospital, Penarth. Lieut.-Colonel Richard Lane Joynt, M.D., F.R.C.S., Consultant for Orthopaedic Workshops in Ireland, and other Red Cross services.

Harold Kerr, M.D., Medical Officer of Health, Newcastle-on-Tyne. John Charles King, M.R.C.S., Medical Officer, Red Cross Hospital, Barry Dock.

Charles Ewbank Lansdown, M.D., Medical Officer in Charge, Newcourt Auxiliary Hospital, Cheltenham. Lieut.-Colonel Gerald Rowley Leighton, M.D., Veterinary Medical Inspector, Scottish Board of Health; Food Inspection Officer, Scottish Command. John Black Lendrum, M.D., C.M., Medical Officer, Woodfield Hospital, Oldham. Lewis Francis Leslie, M.R.C.S., L.R.C.P., Medical Officer, Abbey Manor Auxiliary Hospital, Evesham. Llewelyn Lewis, M.D., J.P., Medical Officer, Gnoll Park and "The Laurels" Red Cross Hospitals, Neath. Francis Seymour Lloyd, M.D., Medical Officer, Wardoun Auxiliary Hospital. Samuel Durham Lodge, M.R.C.S., L.R.C.P., Deputy Commissioner of Medical Services in Leeds and Bradford, Ministry of National Service. Percy Roycroft Lowe, M.B., B.C., late Officer in Command on Princess Christian Ambulance Train. Horace Lake Lowis, M.B., C.M., Surgeon in Charge, Camberley Military Hospital. Arnold Lyndon, M.D., Medical Officer and Organizer, Grayshott Auxiliary Hospital, Hindhead, Surrey.

Miss Anne Louise McIlroy, M.D., D.Sc., Scottish Women's Hospital. Major Nathaniel Samuel Manning, F.R.C.S., L.R.C.P., Deputy Commissioner of Medical Services, Ministry of National Service. Howard Marshall, M.B., B.C., Medical Officer in Charge, Cirencester Auxiliary Hospital. Alfred Mason, M.C., M.R.C.S., Assistant County Director, British Red Cross; Medical Officer, St. Anselm's V.A.D. Hospital, Walmer. William John Collings Merry, M.D., B.Ch., Senior Surgeon, Red Cross Auxiliary Hospital, Eastbourne. Alfred Miles, M.R.C.S., Medical Officer at Dinas Powis Hospital. James Millar, M.D., C.M., Medical Officer in Charge, Bowden Hospital, Nottingham. Major Robert Arthur Milligan, M.D., M.R.C.S., J.P., Operative Surgeon, Barry Road Primary Military Hospital, Northampton. George Millsom, L.R.C.P., M.R.C.S., Medical Officer of Health, Metropolitan Borough of Southwark. Isaac Gibson Modlin, M.D., B.S., Commandant and Medical Officer, 4th Durham V.A.D. Hospital, Jeffrey Hall, Sunderland. Miss Florence Muriel Morris, M.B.E., M.D., Commandant and Medical Officer, Paignton Voluntary Aid Hospital. Major John Murray, M.B., M.S., Medical Officer, Highland Moors and Rock Spa Auxilary Hospitals; and other Red Cross services.

Frederick Lucius Nicholls, L.R.C.S., Medical Officer, Fulbourn Auxiliary Hospital, Cambridgeshire. Major Frederick Pitcairn Nunneley, M.D., Medical Officer, Lady Dudley's Red Cross Hospital for Convalescent Officers, Brighton.

William James O'Donovan, M.D., M.R.C.P., Chief Medical Adviser on Prevention of T.N.T. Poisoning, Ministry of Munitions. Eustace John Parke Olive, M.D., F.R.C.S., Medical Officer, Holmdene Auxiliary Hospital, Leamington. William Wallace Ord, M.D., Medical Officer, Salisbury Infirmary, and Wilton and Longford Castle Auxiliary Hospitals, Wiltshire. John Orr, M.B., Assistant County Director, Eccles Division, British Red Cross Society; Honorary Medical Officer, Elmbank and Eccles and Patricroft Red Cross Hospitals, Cheshire.

William Panckridge Panckridge, M.B., Medical Officer, Adhurst St. Mary Auxiliary Hospital, Petersfield, Hampshire. Benjamin Lewis Paton, M.D., Medical Officer, Ravenhill Auxiliary Hospital, Staffordshire. Nevill Coghill Penrose, M.B., Ch.B., Medical Officer, Banbury Auxiliary Hospital. Edward Verdon Perry, M.R.C.S., L.R.C.P., J.P., Medical Officer, Cawston Manor, Reepham, and Felthorpe V.A.D. Hospitals, Norfolk. Lionel James Picton, M.B., Medical Officer, St. John Hospital, Somerford Park, Congleton, and Witton House Auxiliary Hospital, Northwich. Geoffrey Hammett Prance, M.D., C.M., Medical Officer, Red Cross Hospital, Ashcombe House, Weston-super-Mare. Robert Chambers Priestley, M.B., Principal Medical Officer and Medical Superintendent, Auxiliary Hospital, High Wycombe.

Robert William Quennell, M.R.C.S., L.R.C.P., Senior Medical Officer, Coombe Lodge Auxiliary Hospital, Great Warley.

Daniel Richmond, M.D., F.R.C.S., Medical Officer and Operating Surgeon, St. John Ambulance Hospital, Rochdale. Joseph William Rob, M.D., Medical Officer, North Surrey Auxiliary Hospitals. Captain James Jenkins Robb, M.D., Deputy Commissioner of Medical Services in the West Midlands Region, Ministry of National Service. Frederick Field Robinson, L.D.S., Senior Dental Surgeon, British Red Cross Society, Paris Branch. Robert Leslie Romer, M.R.C.S., Medical Officer, Wall Hall Auxiliary Hospital, Stanmore, Middlesex.

George Scarr, M.B., L.R.C.S., J.P., Medical Officer, St. John Ambulance Hospital, Radcliffe, Lancashire. Charles Robert Scott, M.B., C.M., Medical Officer and Commandant, "Teesdale House" Auxiliary Hospital, Marcham Road, Abingdon, Berkshire. Edmond Wallace Selby, M.D., Medical Officer, Arnold's Hospital, Doncaster. William Vernon Shaw, M.D., B.Ch., Medical Officer, Ministry of Health. Thomas William Shore, M.D., Member of Central Medical War Committee, Ministry of National Service. Major James Bertie Simpson, M.D., T.D., D.L., valuable medical war service. James Donald Sinclair, M.R.C.S., L.R.C.P., Medical Officer, 6th Durham Voluntary Aid Hospital, Woodside, Darlington. Charles William Smeeton, M.R.C.S., L.R.C.P., Commandant and Medical Officer, Hovingham Hall Auxiliary Hospital, North Yorkshire. Henry Watson Smith, M.D., Director of the Lebanon Hospital for Mental Diseases, Asfuriyeh, Syria. James Beveridge Spence, M.D., M.Ch., Resident Physician and Superintendent, Staffordshire County Asylum. William Waters Stainthorpe, M.D., J.P., Medical Officer of Health, Cleveland Rural and Urban Districts. Major John Sterry, M.R.C.S., L.R.C.P., Assistant County Director, Sevenoaks Division; Medical Officer St. John's V.A.D. Hospital, Sevenoaks.

James Maxton Thom, M.B., C.M., J.P., Member of War Executive, Scottish Branch, British Red Cross Society. William Thomas, M.R.C.S., L.R.C.P., J.P., Medical Officer, Auxiliary Hospital, Rhyl. William Edmund Thomas, M.R.C.S., L.R.C.P., Medical Officer, Red Cross Hospital, Bridgend, Glamorganshire. Norman Frederic Ticehurst, M.B., F.R.C.S., Medical Officer, Normanhurst Auxiliary Hospital, Battle, Sussex. Walter Reginald Tuckett, M.R.C.S., Medical Officer, Charnwood Auxiliary Hospital, Nanpanton, near Loughborough, Leicestershire. Philip Dymoch Turner, M.D., M.R.C.S., Medical Officer, The Castle Auxiliary Hospital, Ryde, Isle of Wight.

Captain John Valerie, M.R.C.S., L.R.C.P., Senior Medical Officer, Hampton Court Auxiliary Hospital. Robert McLeod Veitch, M.D., Deputy Commissioner of Medical Services, Ministry of National Service. Charles Visger, M.R.C.S., Medical Officer, Red Cross Hospital, Oaklands, Clevedon.

George Bartram Wainwright, M.B., Medical Services, Winchester Auxiliary Hospital. Captain John William Walker, M.R.C.S., L.R.C.P., Surgeon, Wentworth House Auxiliary Hospital, Wakefield. John Wallace, M.B.E., M.B., C.M., Medical Officer in Charge and Commandant, Red Cross Hospital, Ashcombe House, Weston-super-Mare. Henry Blanchard Walters, M.R.C.S., L.R.C.P., Commandant and Medical Officer, Chudleigh Auxiliary Hospital, Devonshire. George Trustram Watson, F.R.C.S., M.B., B.C., Assistant County Director, Tunbridge Wells Division, British Red Cross and Order of St. John; Medical Officer, Bredbury V.A.D. Hospital, Tunbridge Wells. Andrew Westwood, M.B., C.M., Medical Officer, Pavilion Hospital, Old Trafford, Manchester. John Arthur Temple White, M.R.C.S., L.R.C.P., Medical Officer, Hillsborough Hospital, Harlow. John Flasby Lawrance Whittingdale, M.B., Medical Officer, Sherborne Auxiliary Hospitals, Dorset. Miss Hilda Kate Whittingham, M.B., B.S., Laboratory Assistant in Hygiene, Royal Army Medical College. Colonel Thomas James Hackett Wilkins, L.R.C.S., L.R.C.P., Deputy Commissioner of Medical Services, London Region, Ministry of National Service. James Frederick Digby Willoughby, M.R.C.S., L.R.C.P., J.P., Medical Officer in Charge, Burgage Manor and Brackenhurst Hall Auxiliary Hospitals, Southwell.

Major William Young, M.B., C.M., V.D., Chairman of the Appeal and Civil Liabilities Subcommittees, Midlothian War Pensions Committee.

(To be continued.)

G.B.E.

Dr. Arthur Everett Shipley, F.R.S., Master of Christ's College, and lately Vice-Chancellor of the University of Cambridge, who was a member of the Central Medical War Committee, is appointed a Knight Grand Cross (G.B.E.).

O.B.E. (Military Division).

Captain F. J. Collings, C.A.M.C., has been appointed O.B.E. for valuable services rendered in connexion with military operations in Siberia.

British Medical Journal.

SATURDAY, APRIL 10TH, 1920.

THE NEW COUNCIL OF MEDICAL RESEARCH.

THE Medical Research Council, which came into existence on the first day of this month, possesses wider powers and greater freedom of action than the Medical Research Committee it replaces. The new Council acts not only in an advisory but also in an executive capacity, and is responsible to the Privy Council through a special committee of that body. This committee, as was stated a fortnight ago, consists of the Lord President, the Minister of Health, and the Ministers who represent the affairs of Scotland and Ireland respectively in Parliament; its composition will ensure that the needs of all parts of the United Kingdom shall be impartially assessed, and that the acts and affairs of the Council shall be authoritatively set forth in Parliament. Technically the constitutional position of the Medical Research Council is analogous to that of the Committee of the Privy Council on Scientific and Industrial Research, but certain defects disclosed in the working of the older body have been avoided. The Medical Research Council is endowed with the independence necessary for the discharge of its important duties; it has the right to accept benefactions from the public, and to manage its own affairs.

The Council, as will be seen by the abstract of its charter published at page 504, at present consists of one member of the House of Lords, two members of the House of Commons, and seven medical members, who are all recognized as leaders in scientific medicine. Three members will retire every two years, but will be eligible for re-election. Appointments to vacancies, whether casual or otherwise, will be made by the Special Committee of the Privy Council, after consultation with the President of the Royal Society and with the Medical Research Council itself. The Council will elect its own chairman and treasurer, and appoint and remunerate its own secretary, who, being also secretary of the Special Committee of the Privy Council, will have direct access to the Minister of Health, and also, when necessary, to the Secretary for Scotland and the Chief Secretary for Ireland. The Council will appoint all its own officers and servants, and remunerate them out of the funds at its disposal. The scientific control is thus complete. The Council is free to determine its own policy and to disburse its funds to the best advantage. One purpose of the charter is to encourage the making of gifts and bequests to the Medical Research Council, which is authorized to accept bequests of money, land, or buildings made to it by individuals or corporations, and also to accept trusts in furtherance of the objects for which it exists. The independence with which the Council is endowed is further shown by the power granted to it to alter its own charter by the vote of two-thirds of its members.

So far as human foresight can ensure the future, these provisions taken together afford warrant for the belief that the Council will be preserved from the defect, to which Government bodies are particularly obnoxious, of magnifying the importance of details of secretarial work and administration to the detriment of the real purpose of the organization to be administered.

The policy of the Council in the future can be judged from the work of the Medical Research Committee in the past, for the scientific members are the same, with the addition of Dr. T. R. Elliott; and Sir Walter Fletcher, who was Secretary of the Committee, is Secretary of the Council. The Medical Research Committee was formally appointed in August, 1913, and got to work in 1914. It was instituted to administer the Medical Research Fund provided under the first Insurance Act by a paragraph which set aside out of moneys provided by Parliament one penny in respect of each insured person for this purpose. The sum thus made available in 1914 was £55,000. The Committee had barely formed its first plans when its organization and energies were in the main turned to problems raised by the war—such as, to take a few instances, the nature and treatment of shock, the course and prevention of gas gangrene, and the diagnosis and treatment of cerebro-spinal fever, the enteric fevers, dysentery, and trench nephritis. The Medical Research Council starts in this respect under happier auspices, and will be able to devote its energies to the many problems of civil medicine which await solution.

The organization now taken over by the Medical Research Council is twofold. There is, on the one hand, the Central Research Institute at Mount Vernon, Hampstead, with departments of bacteriology and experimental pathology, biochemistry and pharmacology, and applied physiology, each with a special staff. This central organization is completed by a statistical department, a library, a bureau of information and a publication office, through which special reports and the periodical, *Medical Science Abstracts and Reviews*, are issued. The secretarial office remains in a central position in London.

It was from the first wisely decided to organize, encourage, and subsidize researches, to be conducted by individual workers in university laboratories and hospitals. Among the researches now in progress in various places may be mentioned those on tuberculosis, which is being investigated at Cambridge, Dublin, Edinburgh, Glasgow, and Reading, and on chronic rheumatoid arthritis at the Research Hospital at Cambridge. The lessons learnt from the researches at the Central Cerebro-spinal Fever Laboratory are being applied to pneumonia, puerperal fever, erysipelas, gonorrhoea, and gonorrhoeal rheumatism. Combined studies of the ante-natal factors of the conditions found in dead and premature births are in progress at Glasgow, Cardiff, and London. The scheme of inquiry into the causes of rickets, organized in Glasgow, is being maintained, and investigations are being pursued in London into the relations between the antirachitic accessory factor, the energy elements of the diet, and general metabolism. The Council is taking over from the Ministry of Munitions several grams of radium salt, which has been placed in the hands of workers at the Middlesex Hospital. The radium will be used for researches into the physiological effects of exposures to various types of radiation. The quantity, which is about ten times as great as any amount previously available for similar work, will allow experiments to be made of a kind not previously attempted. In arranging all these researches the Medical Research Council is advised by special committees. The investigations into industrial fatigue are being continued under the advice of a special committee appointed jointly with the Department of Scientific and Industrial Research.

The Medical Research Council has a great task and great obligations; it may, we are confident, be trusted to rise to the height of the occasion. The Committee it has succeeded made itself the channel through which a large part of the funds at its disposal fertilized discovery in its natural fields—the universities. As we said a few months ago, it has, without any pretence at interfering with the proper autonomy and individuality of scientific men, given to them a sense of combination and of common work, which is of great benefit to pathology and pathologists. It has upheld to the utmost the claims of freedom in research. The charter of the new Council is so drawn that it will have power to develop this enlightened policy to the utmost.

SKIAGRAPHY OF SOLID VISCERA.

EVERYBODY knows that the *x* rays unaided are incapable of giving much information as to the condition of the abdominal viscera. The introduction of the opaque meal of bismuth or barium opened up a new field of study, and added a most valuable method of diagnosis. Information as to the condition of the solid viscera has been difficult to obtain, these important organs being, in a radiographical sense, "silent." A method has been introduced, however, which bids fair to render the photography of the liver and spleen an everyday occurrence. Air or oxygen is introduced into the abdominal cavity before the radiogram is taken. The spleen and liver then stand out in sharp definition on the plate, irregularities of surface, enlargements, and new growths being clearly seen. Just as the opaque meal renders the contours and movements of the gastro-intestinal tract visible by contrast with the rest of the abdominal organs, so the new method causes the latter invisible viscera to come vividly before the eye.

This procedure, which we have called new, was first tried on live animals and on the cadaver so long ago as 1912 by Weber[1] of Kiev, but has been perfected by the work of Rautenberg[2] and of Goetze.[3] An excellent account of the manner in which the injection is made is given by K. F. von Teubern.[4] Unfortunately the later German papers are not illustrated owing to the difficulty and expense of reproduction. A well-illustrated paper is that of two American workers, Stein and Stewart[5]; in their pictures the solid viscera can be seen with surprising clearness and definition. To make the injections Rautenberg fills two rubber bags with air and connects them to a trocar thrust through the abdominal wall. By pressure on the bags he is able gently to inject about a litre and a half of air or oxygen; or a large syringe or small hand-pump may be used. Stein and Stewart simply use the ordinary rubber bag of a nitrous oxide anaesthesia apparatus. Von Teubern's method is probably the best. He uses a special trocar and cannula (1.0 mm. thick), the latter having a blunt closed end and a lateral eye. It is introduced halfway between the umbilicus and symphysis pubis in the mid-line under local anaesthesia. The inflow of air is controlled by a pneumothorax manometer connected in lateral series with the delivery tube. The amount of air injected was 1,500 to 2,000 c.cm. under a water pressure of 30 to 40 cm.; the highest intra-abdominal pressure reached was 11 cm. of water. The patients often complained of pain in the shoulders and around the abdomen, and some discomfort was the rule. At the end of the examination the air is released by puncture with a large trocar (1.5 mm. wide). No serious effects have attended these manœuvres, though Teubern once produced emphysema up to the neck when using Rautenberg's needle, which is too short (4.0 cm.).

The liver is clearly seen with the *x* rays; the subphrenic spaces are opened up by the gas, and can be seen as clear areas above the displaced liver. Gall stones, if present, can often, but not invariably, be made out. The spleen can always be well seen and any pathological change in it recognized. The kidneys are usually fairly clear. Rautenberg[6] has written a special paper on this subject. The intestines are always to be distinguished, best if they have been filled with bismuth beforehand. Stein and Stewart figure myomata of the uterus, intraperitoneal adhesions (probably omental), an enlarged kidney, an enlarged lobulated spleen, a cystic ovary, the tail of the pancreas, and the normal liver and spleen. This list gives some idea of the catholicity of the method, and of the varied information that can be obtained by it. It seems possible that this artificial "pneumo-peritoneum" is destined to play an important part in the differential diagnosis of intra-abdominal tumours. British conservatism may be slow in adopting the method, but for the benefit of the cautious it may be said that Goetze has himself injected air 150 times. After all, it is but the same thing as those intraperitoneal injections of oxygen which were advised by Godwin[7] in this country for the treatment of tuberculous peritonitis.

[1] Weber, *Fortschritte d. Roentgenstrahlen*, 1913, 20, 453.
[2] Rautenberg, *Deut. med. Woch.*, 1914, 1205; *Berl. klin. Woch.*, 1914, No. 36.
[3] O. Goetze, *Deut. med. Woch.*, 1919, 45, 491.
[4] von Teubern, *Deut. med. Woch.*, 1919, 45, 1242.
[5] A. Stein and W. Stewart, *Annals of Surgery*, 1919, 70, 95.
[6] Rautenberg, *Berl. klin. Woch.*, 1919, 56, 201.
[7] H. S. Godwin, *Lancet*, 1912, ii, 828.

JUNE MEETING AT CAMBRIDGE.

THE Sections of Neurology and Psychiatry and of Pathology and Bacteriology of the Annual Meeting of the British Medical Association, which will be held in Cambridge at the end of June, have completed their preliminary arrangements. On the morning of Wednesday, June 30th, there will be in the Section first named a discussion on the early signs of nervous disease and their interpretation. It will be opened by the president, Dr. Henry Head, F.R.S., and many members have expressed their desire to take part. On Thursday morning, July 1st, a discussion on dementia praecox and its relation to other conditions will be openedby Dr. Bernard Hart; and on the morning of Friday, July 2nd, Dr. T. A. Ross will introduce a discussion on psychotherapy, to which numerous speakers have expressed their desire to contribute. It has been arranged, in conjunction with the authorities of Cambridge, to give a series of demonstrations in the Medical Buildings on one afternoon. Another afternoon will be set aside for microscopical and other demonstrations in the Physiological and Psychological Laboratories. The Section of Pathology and Bacteriology will devote the first morning (Wednesday, June 30th) to morbid anatomy, when a discussion on atrophy of the liver will be introduced by Professor Stuart McDonald of Newcastle. The morning of July 1st will be given to experimental pathology, when Dr. J. A. Murray, Director of the Imperial Cancer Research Fund, will introduce a discussion on the present position of cancer research. The third morning (July 2nd) will be given to bacteriology, and Dr. J. A. Arkwright, of the Lister Institute of Preventive Medicine, will open a discussion on the bacteriology of cerebro-spinal meningitis. A collection of specimens to illustrate the three subjects will be shown. The afternoon of each of the three days will be devoted to a meeting of the Pathological Society of Great Britain and Ireland; details of the papers to be read and the demonstrations to be given will be published later.

The Annual Meeting will be opened by the President, Sir Clifford Allbutt, Regius Professor of Physic in the University of Cambridge, on Tuesday evening, June 29th. The Representative Meeting will begin on the previous Friday morning.

A DOGS' BILL IN AMERICA.

WE have received from Dr. Keen of Philadelphia the report of evidence before a Subcommittee of the United States Senate touching a bill to prohibit experiments on dogs. The text of the bill is short and formal. The evidence ranged over the whole subject of experiments on animals. The proceedings were less formal than those of a Parliamentary Committee in England; there were interruptions, and now and again hot controversy between opposed witnesses. The general character of the evidence was that of the evidence given before our Royal Commission on Vivisection, 1906. Here and there, in the evidence in favour of experiments on animals, one finds an exaggerated or inaccurate statement. The antivivisection evidence was, in general, rather worse than that given before our Royal Commission. Now and again it was truthful; now and again it had unearthed some wrongdoing, perhaps from thirty to fifty years old; but, on the whole, it was disgraceful to the people who gave it. We find strange mistakes made by them over English names. Mr. Lawson Tait is called Sir Lawson Tait; Dr Arabella Kenealy is called "he"; and our Royal Commission on Vivisection is said to have been "composed of England's distinguished scientific men." A member of the medical profession in England, who was on the side of antivivisection, is called, offhand, "one of England's most distinguished physicians." Mr. Coleridge's copy of the German illustrated catalogue of instruments (1902) is said to have been "made under the authority of the British Museum." And so on. Perhaps the most wearisome thing in this report is the sense that most of these antivivisection instances and arguments were sifted and scrutinized, laboriously and thoroughly, by our own Royal Commission. Yet here they are, produced again, in Washington, ten years later, as if nobody had ever answered them. It is greatly to be desired, that the extremists of antivivisection, alike in the United States and in this country, should take to heart what Newman said, in 1851, of the extremists of prejudice against his religion: "We are dressed up like a scarecrow to gratify, on a large scale, the passions of curiosity, fright, and hatred. . . . The prejudiced man takes it for granted that we, who differ from him, are universally impostors, tyrants, hypocrites, cowards, and slaves. If he meets with any story against us, on any or no authority, which does but fall in with this notion of us, he eagerly catches at it. Authority goes for nothing; likelihood, as he considers it, does instead of testimony; what he is now told is just what he expected. . . . Perhaps it is wrong to compare sin with sin, but I declare to you, the more I think of it, the more ultimately does this prejudice seem to me to corrupt the soul, even beyond those sins which are commonly called most deadly. And why? Because it argues so astonishing a want of mere natural charity or love of our kind. They can be considerate in all matters of this life, friendly in social intercourse, charitable to the poor and outcast, merciful towards criminals, nay, kind towards the inferior creation, towards their cows, and horses, and swine; yet, as regards us, who bear the same form, speak the same tongue, breathe the same air, and walk the same streets, ruthless, relentless, believing ill of us, and wishing to believe it. They are tenacious of what they believe, they are impatient of being argued with, they are angry at being contradicted, they had rather that *we* should be guilty than *they* mistaken; they have no wish at all we should not be unprincipled rogues and bloodthirsty demons. They are kinder even to their dogs and their cats than to us." Happily this sort of prejudice is dead or dying in England. Let us hope that we shall likewise live to see the dying-out of the prejudice against experiments on animals. It is less than it was; the facts of the past five years have told against it.

LETHARGIC ENCEPHALITIS.

CASES of lethargic encephalitis are reported from Rumania and also from Egypt, where three have occurred at Port Said and two at Cairo. We made brief reference last week to the occurrence of a number of cases of lethargic encephalitis in and around Montpellier. The matter is of so much interest that we make no apology for recurring to it. There were eighteen cases, most of which occurred in the first fortnight of February; three of these were fatal. Among the more important symptoms were headache, intestinal and vesical paresis, sleepiness varying from simple drowsiness to lethargy, stupor, delirium, and ocular paralyses. The symptom-complex was extremely variable; thus sleepiness was not found in 40 per cent., while the brain has not been the only point of attack in the nervous system. Professor Bosc thinks that the disease is a manifestation of influenza; "In reality," he says, "we have to do with a 'grippal' infection, a *grippe* of primarily nervous type. The symptoms of invasion have been the same. There has been a coexistence of these cases and of epidemic influenza, an existence of identical cases during the influenza epidemic of 1919." At a previous meeting of the Montpellier medical society, apropos of a discussion on encephalitis lethargica opened by M. Rauzier, M. Vires called attention to passages in Sydenham connecting a fever characterized by lethargy with influenza. The passage is not cited in the report before us, but is probably that in the fifth book of the *Medical Observations*, where it is stated that a characteristic of the continued fever of 1675 was "an affection akin to coma. Patients who were attacked by it were stupid or delirious, dozed for weeks together, and were awakened only by the loudest noises." In a later chapter Sydenham correlates this fever with the epidemic cough of 1675, undoubtedly an influenza. That there is some epidemiological relationship between influenza and encephalitis lethargica has been maintained by Hamer and Crookshank in this country, and is, we think, not improbable. A contrary opinion has been chiefly defended on clinical grounds, which are seldom satisfactory foundations for epidemiological generalizations. It cannot, however, be said that the problem has yet been satisfactorily solved.

PLANT RESPONSE.

A FEW weeks ago (March 20th, p. 412) a short account was given of a lecture by Sir Jagadis Bose at the Royal Society of Medicine, describing the observations he has made on plants with an instrument of his invention, termed the "magnetic crescograph," by which movements are magnified ten million times. With it Sir J. Bose has observed movements in plants which he considers to be due to the process of growth. The lecture was illustrated by a demonstration of the instrument. Professor Waller, in some remarks afterwards, raised the question whether the movements might not be due to heating effects and be such as might be obtained with dead material. He invited Sir J. Bose to repeat the experiments under laboratory conditions here. Sir J. Bose, in his reply, maintained the truth of his deduction, and mentioned, as reported at the time, that his experiments had been tested under laboratory conditions by Professors Starling and Bayliss, among other English physiologists. Professor Bayliss, writing to *The Times* on March 20th, offered the necessary facilities for the repetition of the experiments in the Institute of Physiology, University College, and suggested that Sir J. Bose should give the names of a few gentlemen to whom he would wish to make the demonstration. Professor Bayliss went on to say that it was generally agreed that an extraordinarily sensitive instrument had been devised, but expressed the

opinion that few physiologists were prepared to agree that all the controls necessary had been shown. He concluded, however, by pointing out that even if similar phenomena were displayed by non-living structures, that fact in itself would not disprove the possibility of recording by this method the real physiological phenomena of growth and its inhibition. In a letter written on March 31st Sir J. Bose accepted Professor Bayliss's offer, and suggested the names—in addition to Professor Bayliss—of Professor Starling, Professor Oliver of University College, and Lord Rayleigh, Professor of Physics in the Imperial College of Science, South Kensington. This, he said, would give two representatives of animal physiology, one of plant physiology, and one of physics. Professor Starling, however, is in India. Sir J. Bose states that his "demonstration will deal with the definite result that the indication of the crescograph is the magnified movement 'of extremely minute changes of length of *growing organs*,' and not of physical disturbances such as that of heat."

THE CIRCUMLOCUTION OFFICE TO-DAY.

THE General Secretary of the Medical Defence Union, Dr. James Neal, has shown us a file of correspondence which forms a striking illustration of the circumlocutory methods of minor officials. The summary we give below tells how a doctor's claim for the payment of a sum due to him was bandied about from office to office until, as the result of six weeks' determined correspondence, a paymaster was at length tracked down who admitted responsibility for the payment, and undertook to make it, subject to somebody else's approval. On February 4th, 1920, a north-country doctor asked the Medical Defence Union's help in obtaining payment of about £8 for filling up a number of army forms, for which a fee of 1s. each is payable under an Army Council Instruction. In August, 1919, the A.D.M.S. Northumbrian District had told him the formalities with which he must comply in submitting his claims. He sent in his account twice to the A.D.M.S., but no notice was taken of it. Dr. Neal wrote to the D.D.M.S. Northern Command, briefly stating the circumstances and asking that the necessary steps should be taken to expedite payment. This communication was acknowledged by postcard, and on February 13th the D.D.M.S. replied that the claims, being in respect of men of the Royal Naval Division, had been forwarded to the Brigade Paymaster, R.N.D., Alnwick. The letter ended: "This department has no jurisdiction as regards the accounts of the R.N.D. I suggest that you should refer the matter to the Accountant-General for the Navy." A letter was accordingly written next day to the Accountant-General of the Navy stating the facts and repeating the request. Twelve days later came the reply that "as the services for which payment is claimed were rendered to the Royal Naval Division, which is under Army control, and as payment would be made from Army funds, your letter has been passed to the Command Paymaster, Aldershot, for any necessary action." Here we see the old game of battledore and shuttlecock being played between the naval and the military authorities—regardless, as usual, of the shuttlecock, whose account remained unpaid. Dr. Neal wrote next to the Command Paymaster, Aldershot, reciting the facts and asking him who was responsible for the payment of the account, and when payment would be made. He added that it was not right that civilian medical practitioners should experience such delay and difficulty in obtaining payment for professional services rendered at the request of a Government department; and that unless some assurance was forthcoming that the matter would be promptly settled he would have to bring the facts to the notice of the medical Members of Parliament. This letter quickly produced an answer from the Acting Paymaster, Aldershot, who said that the previous letter had been received and passed to the Command Paymaster, Northern Command, for very early action, "as the account is payable by him and not by me." A registered letter was thereupon sent to the Northern Command Paymaster, asking for a definite assurance within four days that the matter would be dealt with by him without delay. The reply by return of post stated that these claims were payable by the Brigade Paymaster, —th Royal Naval Division, Cornwall House, London, to whom they had been forwarded on December 6th, 1919. The writer implied that he had already done his best in the matter; but added that he was sending a telegram to the Brigade Paymaster requesting an urgent settlement, and was also writing to him. On March 20th Dr. Neal wrote again to the Accountant-General of the Navy, summarizing the story up to that date, expressing in mild terms his opinion of the way in which the account was being passed from one department to another, and inquiring who was responsible for payment of it, and when it would be paid. He wrote also to the Brigade Paymaster asking him to say at once whether he was responsible for payment and when it would be made. Two days later the officer-in-charge of the Royal Naval Division pay ledgers at Cornwall House wrote that the original claim had been forwarded to the A.D.M.S., Northumbrian District, on December 10th, for various certificates, etc., required by the Northern Command Paymaster, but that the claim had evidently gone astray. The duplicate claim, however, had now been forwarded to the Northern Command Paymaster for approval of payment, and "when this approval is obtained payment will be made by me." The story speaks for itself; the appropriate comment was made many years ago by Charles Dickens. Remembering how hard the General Secretary of the Medical Defence Union has had to work, we may well wonder whether the doctor unaided would have lived to receive the sum due to him. That it would have been paid in the end we can believe, because these accountant departments in the services, though they grind slowly, are not in the habit of forgetting altogether a penny due from them to someone, or from someone to them. We have seen the greater part of an entire page of an army agent's ledger taken up with the adventures of half a crown deducted in error from a medical officer's pay when he was in France, and at last refunded to his wife after a bewildering correspondence.

THE PROGRESS OF CREMATION.

SIR CHARLES CAMERON, M.D., in his presidential address to the Cremation Society on March 31st, said that one of the results of the war had been to create a greater interest in cremation, not only in this country among returned soldiers, who had seen on the battlefields for the first time what earth burial meant, but also among the people on the Continent. Under the Austrian law cremation was forbidden, but certain Bohemians, inspired by the enthusiasm of a poet who had returned to his native land after a sojourn in the United States, founded a society which in return for an annual subscription ranging from 12 kroner (10s. at par value) in the case of persons under 35, to 50 kroner in the case of sexagenarians, undertook to have bodies cremated at Zitava in Saxony. Under this arrangement 250 cremations were carried out. A German society, Die Flamme, also erected a crematorium at Liberic, an industrial town in Bohemia, but the Austrian Government forbade its use and sealed its doors. After the revolution of October, 1918, the Austrian veto was ignored, and in the nine months following 753 cremations took place in this Bohemian crematorium, while the active membership of the Bohemian society, already over 3,000, rapidly increased. The work was at first carried out without either legal sanction or interference; but in April, 1919, the national assembly of Czecho-Slovakia passed a measure legalizing and regulating cremation. The number of crematoriums in Great Britain is now, Sir Charles Cameron stated, fourteen,

and the number of cremations last year exceeded 2,000, an increase of 15 per cent. over the figure for 1918, and of 33 per cent. over that for 1917. The large number of eminent persons included in the society's list of 22,000 cremations since its commencement proved that among the more intelligent classes of the community the propaganda had not been in vain, but the society had been able to make little headway among the poorer and less educated, although these were the people who were ready to make considerable and lifelong sacrifices to provide for funeral expenses, as instanced by the experience of the industrial insurance companies. The suggestion was made at the meeting that the charge for life membership of the society—which carries with it the payment of all expenses of cremation anywhere in the United Kingdom—should be graduated on the basis of the subscriber's expectation of life, as in the case of insurance premiums. The address of the Cremation Society of England is 324, Regent Street, London, W.1.

NYCTALOPIA OR HEMERALOPIA.

IN an annotation on an epidemic of night blindness which was published last week we used the term hemeralopia as meaning night blindness, following the author whose paper was discussed. This meaning has often been attached to it for the last two centuries by writers throughout Europe. The word has been used as expressing the opposite of nyctalopia or night vision. It seems clear, however, that nyctalopia should be held to mean night blindness and hemeralopia the rarer condition of improved vision with diminished light. A scholarly paper published by Sir John Tweedy in the *Royal London Ophthalmic Hospital Reports* in 1882 traces the history of the words from ancient Greek to modern medical writings. The term nyctalopia used by Hippocrates in describing the cardinal symptom of the obscure epidemic at Perinth in Thrace is defined in one of the writings attributed to Hippocrates as meaning ability to see at night, but in all the subsequent classical writers it is defined as *in*ability to see at night. It is supposed that the privative *οὐ* has been omitted in manuscript transcriptions, and Sir John Tweedy supplies cogent reasons for believing that night blindness is the correct translation. During the Middle Ages the Hippocratic writings were much neglected, and it was only on the revival of interest in them towards the eighteenth century that the supposed clerical error gave rise to the confusion of meaning. Hemeralopia was seldom used in medical writings before the eighteenth century. It would perhaps be better, in the circumstances, to give up the use of both terms altogether.

THE MEDICAL REGISTER.

THE *Medical Register* for 1920 has been issued.[1] It contains 44,522 names; of these 1,500 are on the Colonial list, and 165 on the Foreign list. The grand total compares with an average during the last five years of 43,794, and with an average for the last twenty-four years of 39,645. At the present time the degrees of nineteen foreign universities in Europe are registrable and those of eight in the United States of America. The right to registration on the Colonial list is possessed by graduates of certain universities and licensing bodies in Australia, Canada, Ceylon, Hong Kong, India, Malta, Newfoundland, New Zealand, and the Straits Settlements. The statistics show a total increase of 596 over the number on the *Register* in 1918, and of 2,582 over the number in 1913, the last year before the war. The number of names removed during 1919 on evidence of death was 643, the lowest number since 1912. Last year 115 names were removed under Section XIV of the Medical Act, 1858, which provides that if no reply is received by the Registrar to an application addressed to a practitioner according to his address on the *Register* the name may be erased. It is, of course, very important that any such inquiry should be answered. Last year thirty-four names were restored to the *Register*, and the majority of these had probably been removed on account of failure to respond to the inquiry.

[1] *The Medical Register* for 1920. London: Published for the General Medical Council by Constable and Co. 1920. (Pp. 1234.)

PROFESSOR WELCH OF BALTIMORE.

PROFESSOR WILLIAM H. WELCH, of Johns Hopkins University, Baltimore, whose reputation as a pathologist is world-wide, was born in Norfolk, Connecticut, on April 8th, 1850. In celebration of his 70th birthday, and as a new expression of the affection and admiration with which he is regarded, it has been decided to collect his chief contributions to medical literature, which are scattered through a great variety of publications, and thus more or less inaccessible. The preparation of the collected edition, which will be issued by the Johns Hopkins Press in three volumes, has been undertaken by a representative committee. The price of the set of three volumes (bound in linen) to subscribers is 16.50 dollars. Subscriptions should be sent to the Johns Hopkins Press, Homewood, Baltimore, Maryland, U.S.A.

THE South African Congress of the British Medical Association will be held next October in Durban at the invitation of the Natal Coastal Branch of the Association.

WE greatly regret to learn that a telegram has been received from Calcutta stating that Dr. Albert J. Chalmers died in the General Hospital on April 6th, at the age of 50, from acute infective jaundice after a week's illness. Dr. Chalmers was associated with Dr. Castellani in the production of the large *Manual of Tropical Medicine*, a new edition of which was issued a couple of months ago.

THE next meeting of the Congress of Physiology will be held in Paris under the presidency of Professor Charles Richet. The proceedings will begin on Friday, July 16th, and will end on the following Tuesday. The last congress was held at Groningen in September, 1913, and it was then decided that the next should be held in Paris. The subscription (35 francs) should be sent to M. Lucien Bull, l'Institut Marey, Avenue Victor-Hugo, Boulogne-sur-Seine (Seine).

Medical Notes in Parliament.

The New Minister of Pensions.

IN the list of changes announced on April 1st it was notified that Sir L. Worthington-Evans had passed from the charge of the Department of Pensions to become a Minister without portfolio (within the Cabinet), and that Mr. Macpherson, on resignation of the Chief Secretaryship for Ireland, had been appointed Minister of Pensions. It must be a source of satisfaction to Sir L. Worthington-Evans that during his charge of the Pensions Office he has been able to do much towards the reorganization of the work there, gearing up machinery so as greatly to reduce the delays, and that he has seen through the revision of the conditions and scales of pensions. Mr. Macpherson comes to the responsible task temporarily worn by his stressful duties in Ireland; but his previous work as Under Secretary for War will stand him in good stead. As a departmental chief he is sure to show the qualities of grip and thoroughness. His unfailing courtesy and patience in the trying period when he was at the War Office won him many friends.

The Easter Recess.—The House of Commons adjourned on March 31st to April 12th.

Deaths from Influenza.—Dr. Addison, in reply to Major Entwistle, said he was advised that the recent small increase in the number of deaths from influenza might be attributed partly to the normal rise which usually occurred at this season of the year, and possibly also to some deaths from pneumonia being ascribed to influenza as a contributory cause. It was noteworthy that the number of deaths from pneumonia had remained practically constant each week since the end of January last.

TREATMENT OF INCIPIENT MENTAL DISEASE.

DURING the last few years evidence has been accumulating that there is a strong movement of opinion, both within and without the profession, in favour of a modification of the lunacy law, the main object being to make better provision for the treatment of incipient or early cases of mental disorder.

The matter was under the consideration of the Medico-Psychological Association of Great Britain and Ireland before the war, and in 1914 a full report on the status of psychiatry was issued. The war prevented any steps being taken to translate the important resolutions then adopted into practice; but the war itself had the effect of arousing new interest in the whole subject of mental disorders, and produced a new attitude on the part of both the public and the medical profession. The Medical Psychological Association therefore felt that the ferment of reconstruction in the air, particularly as regards questions of health, made it desirable that its position on this matter should be reviewed and a further report issued representing the most recent opinion as to how the objects in view could best be accomplished, so that the association would be ready to direct and support any measures of reform that might be proposed. The matter was very carefully considered by a special committee, and its report eventually received the unanimous approval of a general meeting.

In its main features the report is in harmony with views set out from time to time in this JOURNAL; nor do they differ in principle from the recommendations made by the Board of Control in its annual reports. In regard to clinics the Board of Control proposes permissive legislation enabling cases of mental disorder incipient in character or of recent origin to receive treatment in general or special hospitals, mental institutions, nursing homes, or elsewhere for limited periods—say six months—without the necessity for certification under the Lunacy Acts, provided the place is under the supervision of the Board. This is only an enabling proposal, but the word "elsewhere" gives it an exceedingly wide scope. The report of the Medico-Psychological Association advises that the duty of providing and maintaining clinics for these purposes should be imposed on local authorities; evidently some sort of obligation will be necessary if the reforms recommended are to be widely and generally adopted within a reasonable time. It is interesting to observe that the cases under consideration are described by the Board of Control as "incipient in character or of recent origin"; presumably these two phrases are not intended to cover identical cases, and if that presumption be correct it seems to follow that the cases need not be merely "of recent origin," a phrase which it would be extremely difficult to define and when defined to apply in practice, but may be "incipient in character." This would apparently cover many cases which run a long course of an ill-defined or undeveloped type and yet remain incipient in character. Such cases are difficult to deal with at present, and for that reason the extension of the principle would be valuable. If, however, this is the intention of the Board, it is difficult to see why the duration of this mode of treatment should be limited to, "say, six months." The Medico-Psychological Association does not specify the period during which the measures proposed should be applicable, nor does it define what is meant by the term "early stages." That would no doubt have to be dealt with when the matter came before Parliament, but the expressions used by the Board of Control seem to indicate a way of meeting the difficulty and allowing sufficient elasticity for practical needs.

Proposals for Reform.

It may be convenient to set out the main conclusions arrived at in the report of the Medico-Psychological Association:

1. That no steps be taken at present to obtain a complete revision of the Lunacy Acts, but to seek to obtain amendments only to those Acts.
2. That it be made the duty of local authorities, either themselves or by arrangement with voluntary organizations, to establish and maintain clinics for the treatment of nervous and mental diseases in their early stages, special provision being made in the organization for children.
3. That these clinics should be housed in special buildings, or in an annexe to a general hospital, be staffed by a special staff trained for the work, and managed by a special committee appointed for the purpose, and that the buildings should be inspected and approved by a Central Government Department.
4. That all institutions for the insane should be allowed and encouraged to admit patients as voluntary boarders under suitable conditions, one of which is the extension of the notice required to be given by the patient of his desire to leave the institution to forty-eight hours.
5. That the Board of Control should have power to allow the reception of patients suffering from mental disease in its early stages without certification in approved homes, or as single patients in ordinary houses, in regard to which a medical practitioner gives a written recommendation stating that suitable treatment can there be obtained, the fact only of such reception to be intimated to the Board.

Several supplementary recommendations are made for improving the administration of the Act, mainly in the interests of the insane.

There can be little doubt that if anything is to be accomplished quickly it is far wiser in the present pressure upon the time of Parliament to concentrate on the most urgent amendments rather than to aim at a complete revision of the Lunacy and Mental Deficiency Acts. A single comprehensive unifying measure was drafted in 1913, but the Government decided to deal with the mental deficiency question in a separate measure which, owing to the war, has hardly yet come into full operation. The Board of Control, in its annual report for 1917, advocates amendments but not complete revision, nor does the latter process seem necessary in order to secure those reforms on which there appears to be substantial agreement.

It will be noted that the report of the Medico-Psychological Association proposes that it should be made the duty of local authorities to provide and maintain clinics. In this it goes further than the Board of Control, which suggests permissive legislation only, and the report of the committee to the conference of the visiting committees of the asylums in England and Wales, held in the Guildhall, London, in February, 1919. This conference considered that the establishment of special mental hospitals should be encouraged. There is much to be said in favour of imposing action by local authorities as a duty. For the success of the plan no half-hearted approach will be sufficient; it is necessary that it should be familiar and accessible to everyone if it is to establish itself without prejudice as a recognized method; for this we have the precedent of the duties imposed on local authorities by the Mental Deficiency Act, and no doubt provisions will have to be made in regard to financial assistance to local authorities by the Treasury similar to those made in that Act. Where such a clinic is established in a special annexe connected with a general hospital it is contemplated that the local authority should come to some arrangement with the hospital board in regard to the cost, etc. There are precedents for such a course, and it is felt that if hospitals are to be induced to organize clinics on these lines, which both for educational, scientific, and practical reasons is so desirable, such financial assistance will be necessary.

In regard to these clinics it has been felt, not only by the Medico-Psychological Association but also by the Guildhall Committee, that they should as far as possible be detached in the public mind from all association with the Board of Control. It is apparently felt that that body is so closely identified with that aspect of the matter which has to do with restraint of the liberty of the patient, with safeguards against dangerous patients, and with the protection of the hopelessly confirmed insane, that the mere fact of the supervision of the proposed clinics being in its hands would tend to give them a character which would make them distasteful to those for whose benefit they are devised. Obviously they would properly come within the purview of the Ministry of Health, and as the Board of Control will, no doubt, before long be transferred to that Ministry there will be ample facility for proper co-ordination. It is for the same reason that stress is laid on the view that these clinics should be housed in special buildings and be supervised by a committee distinct in name from the Asylums or Mental Deficiency Committee. Only as regards private patients does it seem necessary to adhere for practical reasons to the body administering the Lunacy Acts, as the prohibition for the improper reception of patients is in their hands, and they must therefore be entrusted with the administration of any relaxation of that prohibition.

The Voluntary Boarder System.

In one important respect the Board of Control has gone further than the Medico-Psychological Association. It is prepared to have the principle of the voluntary boarder extended not only to all the various classes of institution, but also made applicable to patients under single care in private houses. A proposal to this effect was put forward by Dr. Weatherley in his book *A Plea for the Insane*, which has been reviewed in these columns. Such a provision, coupled with the proposed provision for private patients in approved homes or as single cases in homes not so approved, would go far to cover all reasonable requirements for suitable treatment of the early nervous and mental disorders in this class of the community. Where detention is necessary recourse can be had to the private asylums, whether as a voluntary boarder or as a certified case. Where the asylum treatment is not necessary detention would be allowed, either under certificates or as a voluntary boarder, or as a single patient, and where neither of these arrangements are necessary or desired, the patient could be dealt with without any formality beyond the intimation to the Board that a patient was being received in a certain house and evidence that suitable treatment can there be obtained. It is proposed that the provisions applying to approved homes shall be applicable also to licensed houses and other institutions for the insane. It will be clear that with such wide and varied liberty of choice it is extremely unlikely that a medical man would recommend a patient to avail himself of any place of treatment which did not adopt one or other of these provisions, and there would be no necessary hardship to the patient in so doing, and consequently no reputable person proposing to receive patients in his house would attempt to evade such provisions. Thus would be eliminated one of the principal difficulties of members of the profession in regard to private patients—that it is not open to them to advise the treatment which they consider best for the health of their patient without the risk of running counter to the law.

The interest taken in the matter was shown a short time ago by the publication of a manifesto on psychiatric clinics for studying the treatment of mental disorders in the early stage, bearing the signatures of Sir Clifford Allbutt, Sir George Savage, Sir Frederick Mott, Dr. Edwin Goodall, Medical Superintendent of Cardiff Mental Hospital, and others more or less directly concerned with the treatment of such disorders. It was therein stated that the necessity of carrying out the reforms outlined had been repeatedly urged in the leading organs of the medical profession, and that the policy recommended would be generally endorsed. The main features of the policy indicated are the provision of clinics in large centres of population, but especially in connexion with the general hospitals and schools of medicine. It is proposed to extend the system of voluntary admission which now exists in respect of licensed houses and registered hospitals for the insane, so that patients, whether of the private or rate-aided class, may place themselves in county borough mental hospitals. It is proposed, further, that the private patient class should be received without certification but with the cognizance of the Board of Control in homes privately owned or supported wholly or partly by voluntary contributions, or in existing public and private mental hospitals (licensed houses). The two methods of admission to county borough mental hospitals, or into private hospitals are given as alternatives, but we presume that both are desired.

The establishment of clinics in psychiatry with in- and out-patient departments as a part of the general hospital system, is regarded as the most important of the above proposals, since it is by this method that the never-ending extensions of existing asylums may best be avoided. In such clinics patients would be received without reception orders or certificates, and subject to the minimum of official supervision. They might be treated under these conditions for six months, and in them students and the future holders of posts in mental hospitals should be taught, all available means of research being provided. It was with this idea that the late Dr. Henry Maudsley eleven years ago made his munificent gift, ultimately amounting to £40,000, which, after much delay, resulted in the erection of the Maudsley Neurological Hospital at Denmark Hill.

Civil and Military Cases.

The manifesto calls attention to the arrangements the army authorities made for mentally disordered soldiers during the war; they were sent into military mental hospitals without any orders or certificates, and were only removed to asylums when, after nine months, they were deemed incurable. Large numbers of men were received in very early phases of the disease, and the advantages were very great. The suggestion is then made that "if these men could be treated thus whilst in khaki, they could and should be similarly treated as civilians, and under far better medical conditions than in asylums." This may be so, but it should not be too readily assumed. Disciplinary powers over the man in khaki are great, and render the need for control by certification in his case superfluous. Whether civilian patients can be equally successfully managed will depend on the extent to which the public will be content to permit a reasonable amount of similar control being exercised in the patients' interest without regularized powers. There may be grounds for hoping that the experience of educational influences during the war may have rendered such an attitude on the part of the public general; but it cannot be denied that there is still an important section of it to whom a meticulous care for the liberty of the individual overshadows the provision for his well-being as a sick person.

There is, however, another difference between the civil and the military case. The soldier who is unfit to continue his duties owing to ill health has no inducement to go on working, and comes automatically under medical direction. The civilian may continue his work when really unfit, or retire to his home and take no steps to secure treatment, or he may refuse to act on his doctor's advice. He and his friends must therefore be taught to turn naturally to the clinic for assistance, and he will judge of the clinic and accept or refuse its help according to the type of malady which will come in time to be associated with it in the course of actual experience.

Legislative Aims.

It is understood that the Board of Control has drafted a bill to carry into effect the changes in this direction which it has recommended in its reports. Although officials speak hopefully of the probability of the early passage of the bill into law, its terms have not yet been made known, and the prospects of early legislation do not seem to onlookers very bright.

The results which will be achieved must to a large extent depend on the detailed provisions and also on the spirit in which they are interpreted. For example, there are some whose principal object is to save those suffering from acute but transitory forms of mental disorder from certification by allowing them to be dealt with under the new provisions; there are others, on the other hand, wh are more anxious to secure the treatment of cases in an early stage so as to stave off mental breakdown, and for this purpose they hope to bring under treatment the antecedent stages which are little regarded by many at present.

It is clear that unless there are very special and extensive facilities, the use of the clinics for the first group of cases would tend to conflict with their utility for the second. The clinics will come to be characterized not by the name that is given to them, but by the cases to the treatment of which they are devoted; care will have to be exercised if they are not to come to be looked upon as simply an unofficial type of asylum.

LAST week we published a letter from Sir Clifford Allbutt and Sir James Mackenzie asking readers to send any medical journals and books they can spare to Vienna, where, owing to the closure of communications during the war and the present high rate of exchange, medical publications in the English language are with difficulty obtained. We have since received an appeal to persons in this country to make contributions to an Anglo-American University Library for Central Europe. The library will be organized on a broad, non-political, non-sectarian basis, and books will be lent to the faculties of the different universities in Central Europe. The proposal has the support of a very large number of scholars and men of science in this country. The secretary is Mr. B. M. Headicar, Librarian of the London School of Economics, Clare Market, London, W.C.2, to whom communications may be addressed.

MOTOR NOTES FOR MEDICAL MEN.

BY H. MASSAC BUIST.

CURRENT PROBLEMS.

FIVE motoring matters of importance to medical men are to the forefront at the moment. On April 19th the Chancellor of the Exchequer has to introduce a budget, one feature of which we foreknow will be the entire recasting of the scheme of the taxation of motor vehicles to pay for the roads on a basis which, according to rumour, is estimated at an initial levy of no less than £7,000,000 a year; a sum vastly more than was raised from motoring before the war. Secondly, the new income tax allowances concern doctors and their cars. Thirdly, the fuel situation is such that it is impossible, for practical reasons, to raise the money by a tax on motor fuel; yet we are to have no relief in the price of fuel. On the contrary, it is likely to rise. There is even a prospect that we may have to be rationed for fuel this year. Fourthly, cars are coming through in quantity; yet this week Mr. Frank Lanchester, President of the Society of Motor Manufacturers and Traders, at a meeting of that body, had to explain to the public the reasons for the rises in the cost of cars to the public now, three months after the resumption of work by the moulders; production is taking place and deliveries are commencing in quantity from the various factories, while imports of cars are, of course, on a quite unprecedented scale from America. Briefly, as was forecasted in these notes more than three months ago, the cause is that the Government has invited a periodical increase of prices because there are quarterly meetings with labour at which, of course, it would be strange did the labour representatives not stipulate for an increase of price. Consequently, as long as this arrangement exists, it is impossible to prevent a continual putting up of the price until such time as the public refuses to buy cars and the workers find themselves shut out of the gates of the factories because there is no market for their products. Fifthly, in connexion with the remodelling of the road laws and so forth, the Government has entirely to reconsider the problem of headlights for road vehicles.

A LOST OPPORTUNITY.

The ideal basis of motor taxes would be fuel. But it is impossible to define motor fuel for the purposes of taxation. There is also the problem of world shortage of motor fuel, and consequently urgent need to get as much of it as possible under the British flag. We foreknow that there will be at least three years' spade work before we can get anywhere near to a normal situation in regard to supplies, far less tackle successfully the task of differentiating between home and imported fuels and, possibly, even between British raised oversea motor fuels and those obtained from foreign countries.

For these reasons the Government is resolved that the tax shall not, as motor car users wish, be transferred from the car entirely to the fuel, as the only possible basis for arriving at true taxation according to road use enjoyed. Even so there would be the alternative tax on tyres. This, however, we know to be also impracticable, because tyre manufacturing is not to be absolutely guaranteed. The man who has bad luck in buying a bad tyre would be doubly penalized if he had besides to pay a second tax to get a tyre that would stand up. Nevertheless, there are alternative schemes, either for doing something in the matter of engine rating or for treating passenger like utility vehicles under the proposed scheme by taxing them according to weight. The engine scheme is wrong, but, alas! the Government is bent on carrying it through. Nevertheless, in this connexion the Treasury rating will be somewhat altered. Even so, it is impossible to alter the basis of rating without putting a premium on construction according to this plan or that, and therefore preventing the freest possible development of the motor vehicle and, above all, handicapping the industry for supply to the overseas market, because cars here must be primarily designed to meet our taxation conditions.

All this is exceedingly regrettable. Nor can it be pretended that it bears any direct relation to the amount of road use enjoyed by the individual taxpayer. Under this head, however, certainly doctors will come off better than many classes of private vehicle users in that presumably they will at least have a certain minimum mileage a year from their motor vehicles in exchange for their tax. Nevertheless, £1 per horse-power practically predetermines the classes of cars in which they can invest their money hereafter.

Of course, the ideal method would be a tax on weight, because then the Government would not interfere with free development of design; and it would in a sense be a tax at least in some fashion related to the amount of road wear and tear which the given class of vehicle was calculated to occasion. Of course, such a tax would be at a higher rate than for the utility motor vehicle which has to compete with railways and other forms of transport; but its scale need not be any more severe than any scheme of engine tax. All that the Government has to do is to fix the amount of revenue to be raised and divide it among the various classes. Moreover, it is a democratic form of tax in that it would be possible to charge the first ten hundredweight at a lower rate than the second ten; the second ten at a lower rate than the third; and the third at a lower rate than the fourth. However, it is not to be; so, regretfully, we must leave this matter and pass on.

INCOME TAX AND CAR DEPRECIATION.

Another point which interests medical men arises in connexion with the report of the Royal Commission on the Income Tax. Paragraphs 213–216 deal with depreciation of plant and machinery. Some witnesses examined by the Commission were of the opinion that the allowance should be calculated always by a regard to the original cost, on the ground that this is theoretically the correct method. While the Commission sees no reason why the taxpayers who desire it, and who choose to put themselves to the trouble of bookkeeping that this system entails, should be barred from an allowance based on the original cost, it is, nevertheless, convinced that as a general rule neither the taxpayer nor the revenue authorities should be saddled with the burden of keeping elaborate records that would be essential if depreciation allowances were normally to be calculated on the original cost of plant. To allow depreciation on the written-down value is perfectly fair to the taxpayer and to the revenue; and the Commission recommends that this method should be continued, the right being reserved to any taxpayer who has the necessary record to have his depreciation calculated by reference to the original cost of the asset. But paragraph 214 says that there is one defect in connexion with this allowance which calls for a remedy. At present depreciation allowances are confined to traders and manufacturers. This does not apply to professional men. A business man is allowed a deduction for the depreciation of the motor car employed in his business; whereas a doctor, whose practice may equally necessitate the use of a car, is not entitled *in law* to any such deduction, even if he has managed to secure it. Therefore, as has already been noted in the BRITISH MEDICAL JOURNAL, the Royal Commission on Income Tax recommends that the allowance should no longer be restricted to traders.

This seems to mean that doctors may be allowed depreciation on their motor vehicles this year. An allowance for obsolescence of traders' machinery was in practice given as far back as 1897, but it did not receive formal legislative authority until 1918. At present the obsolescence allowance can be granted when the obsolete plant or machinery is replaced. But the Royal Commission recommends that it should be given in the case of machinery or plant disused for any reason, whether replaced or not, except where the disuse is the result of the discontinuance of the business, when it cannot properly be distinguished from the general capital loss entailed by cessation. The ordinary allowance for depreciation is deducted from the average profits when ascertained. The obsolescence allowance, on the other hand, is allowed as a trade expense in the year in which the replacement takes place. Further, any unexhausted depreciation allowance is carried forward for an indefinite period as a deduction from the average profits assessable, but obsolescence allowance is not.

WHEN A CAR IS DISCARDED AND A NEW ONE BOUGHT.

The Royal Commission recommends that in future any ordinary depreciation allowance and obsolescence allowance shall be regarded as trade expenses of the year the profits of which are being calculated. If they are so treated the necessity for carrying forward unexhausted depreciation allowances will cease, since a trading loss caused by the allowance of depreciation will be treated for income tax purposes in the same way as any other trading loss. But the Commission points out that if a taxpayer, instead of claiming a depreciation allowance, prefers to deduct the cost of renewal as and when they occur, it is allowable for him to do so. In the opinion of the Commission this right should remain to the individual taxpayer.

There was some divergence in the evidence as to the correct method of calculating the allowance for such renewal, some witnesses stating that the allowance should have reference to the cost of the machinery replaced, while others held that it should be calculated on the cost of the new machinery. The Commission considers that the allowance for renewal should be calculated by reference to the cost price of the machinery replaced. This puts it in the same position as the allowance for depreciation—which is the alternative to the allowance of renewal—for depreciation is necessarily calculated on the cost of the existing machinery.

Inasmuch as the Chancellor of the Exchequer is understood to have promised that these recommendations are to be carried into law, the situation to be expected after the Budget can be calculated. In regard to motor cars, of course, many now owned are worth more than their original cost, whereas in the next two years they will have a scrap value only; yet they will have to be replaced at post-war costs. That means a very heavy expenditure for the individual medical man in the case of a car, because he can claim depreciation or replacement only on the original cost of the vehicle. On the other hand, should the price of cars fall any time five or ten years hence, when the average medical man will be wanting yet a third car and will be able to buy it cheaply, he will get some of his money back, because he will be allowed to claim the depreciation for the car he is going to buy, say in the next six or eighteen months, at fabulous post-war prices; and all those years hence he will be able to get what will then be a fabulous depreciation allowance for the given vehicle. So that it is really only a question of laying out money without interest; and the law would certainly be much more fair if amended as proposed.

England and Wales.

CONSULTING SURGEON AND HOUSE-SURGEON.

IN the Honours List recently gazetted the name of Mr. Edward J. Domville, Consulting Surgeon to the Royal Devon and Exeter Hospital, appears among the O.B.E. The reason for conferring this honour appears to have been the rather unique position occupied by him during the last three and a half years of the war. Owing to the difficulty of filling the post of house-surgeon, the committee applied to Mr. Domville to help them by resuming a post in the hospital which he had filled some forty years before. Mr. Domville consented to do this, and as the honorary medical staff was temporarily diminished in number owing to the occupation of all its members in war work, the house-surgeon was often called upon to discharge very important duties, medical as well as surgical. When he retired, on the declaration of the armistice, his active colleagues united in giving him a handsome silver rose bowl inscribed with their names, and four silver candlesticks, while the Weekly Committee gave him an antique clock and an album containing a list of subscribers, and a warm expression of their gratitude for the unselfish devotion with which he had carried out the duties of his office.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

A special committee, to be called the Statistical Report Committee, was recently appointed by the Prince of Wales as President of the Fund. It consists of the Hon. Sir Arthur Stanley (chairman), Sir Cooper Perry, and Mr. Leonard L. Cohen. The Fund first issued a statistical report in 1904. Since then it has been enlarged and improved on several occasions, but changes and progress in hospital conditions now call for additions and modifications. The necessity for economy in staff and material during the war led to the omission of various tables, and it was thought inadvisable to make any alterations not absolutely necessary. A considerable number of suggestions have been received during recent years, and the new committee is to consider these and other suggestions and to advise as to the form in which the Fund's statistical report should in future be published.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL, LONDON.

At the annual meeting of Queen Charlotte's Hospital and Maternity Training School, Marylebone Road, London, on March 30th, it was reported that during the past year nearly 2,000 patients had been treated in the wards and a similar number attended in their own homes. The increase in the number of applications for admission was largely attributed to the shortage of houses. The chairman emphasized the great importance of the work in the ante-natal and child welfare departments, where over 5,000 patients had been treated. A large increase in the number of medical practitioners, students, midwives and nurses attending the hospital was noted, a considerable number of the medical practitioners and nurses being members of the Dominion and American medical and nursing services who had taken out courses before leaving this country. It is recognized that a new out-patient department and other improvements are urgently needed, but the expenditure would be £100,000, and there was a deficit on the year's working of over £2,000.

LONDON DISTRICT DISCHARGE CENTRE.

At a dinner held at the Mitre Hotel, Hampton Court, on March 25th, Dr. T. W. Morcom-Harneis was the recipient of a presentation silver tea service from the members of the Medical Boards of the London District Discharge Centre. In making the presentation Dr. Taylor, J.P., Coroner for the Richmond District, expressed the personal regard of the staff for Dr. Morcom-Harneis during his term of office as D.C.M.S., and said the efficiency and smooth working of the boards was largely due to his tact and consideration for all those who worked with him. Dr. Morcom-Harneis, in replying, expressed his regret that his association with them, which had been of the pleasantest character, had now come to an end owing to the closing down of the centre. Dr. Rees Davies also spoke.

PRESENTATION TO DR. P. V. FRY.

On March 28th Dr. P. V. Fry, Sowerby Bridge, was entertained by his medical friends in the Calder Valley, Hebden Bridge, Sowerby Bridge, and Elland areas, on the occasion of his departure from the district. He was at the same time the recipient of gifts of silver as a mark of appreciation of his services in organizing the local medical society and promoting good fellowship amongst its members. Dr. Fry has represented the Calder Valley area on the West Riding Panel Committee since its inception in 1912, and has for some years been a member of the Insurance Acts Committee of the British Medical Association and of the Ministry of Health Committee.

LEICESTER GRADUATE COURSE.

The Leicester Medical Society has arranged a short course of post-graduate lectures, to start on Tuesday, April 13th, and continuing every Tuesday until May 11th. The course will be given by Dr. W. Langdon Brown, of St. Bartholomew's Hospital, who has taken for his subjects: The sympathetic nervous system and the ductless glands, Glycosuria, and Disorders of the digestive system.

Scotland.

SCHOOL HEALTH ADMINISTRATION IN SCOTLAND.

IN a Memorandum dated March, 1920, the Scottish Board of Health (to which have now been transferred the powers of the Scottish Education Department with regard to medical inspection and treatment of school children and

young persons) describes the leading principles which should guide education and public health authorities in the preparation of their schemes; at the same time, interesting information is given concerning the conditions now existing in Scotland. In all the large cities and eight counties the medical officer of health and school medical officer are independent; and only in twenty-three counties and one burgh is the duty of the school medical officer exercised by the medical officer of health or his assistant. Administrative unity between the two branches is commended, and its inception, where not already existing, is enjoined. Treatment of school children, as distinct from inspection, was not authorized in Scotland until 1913; and during the war "the school medical service in Scotland suffered almost to a point of total suspension," so that it is not surprising to find that schemes of treatment have been organized only by a few secondary education committees in the five burghs. These conditions contrast forcibly with those obtaining in England and Wales, where, in 1914, 266 authorities out of 318 exercised powers of treatment, and 179 provided school clinics. These figures have since been increased to 287 and 252 respectively, and in 1918 dental treatment was given by 169 English authorities. In emphasizing the importance of the provision of treatment, the memorandum insists that treatment and inspection shall be co-ordinated, under conditions of "virtual unity," within the control of the school medical officer. Other sections of the memorandum deal with the provision of school nurses (who appear to exist in very few areas), with inspection in continuation schools, and with physical education. The whole question of the latter, it is said, should come under direct medical supervision with a view, first, to guiding its development as a subject of hygienic purpose, and secondly, "to establishing it on a footing that would make it an effective basis for the application of measures touching other aspects of personal hygiene." With regard to staffing, the Board considers it desirable that all district medical officers should possess the diploma in Public Health or its equivalent; all school medical officers should have experience in as many as possible of the following: diseases of children, diseases of the eye, diseases of the ear nose and throat, diseases of the skin, and school hygiene. Before confirming appointments the Board requires that statements of candidates' qualifications and experience should in all cases be submitted to it.

Ireland.

ROYAL ACADEMY OF MEDICINE.

A MEETING of the Section of Surgery of the Royal Academy of Medicine in Ireland was held on January 30th, with Mr. J. B. Story, President of the Royal College of Surgeons in Ireland, in the chair. Mr. William Pearson showed a specimen of cancer of the caecum, with faecal fistula, successfully removed by operation. Sir W. I. de C. Wheeler read a paper on compression of the lower brachial trunk by the first dorsal rib. Referring to the work done by Stiles, Stopford, and others, he described a case operated on by himself. The condition simulated that associated with cervical rib, but *x*-ray examination revealed no trace of this abnormality. An unusual feature was that while the patient could scarcely write at all with the right hand in the ordinary position, he could write easily when the arm was raised above the shoulder level. The subclavian artery was found to lie well above the subclavian groove. He described the operation for removing the segment of the first rib compressing the nerve trunk. Mr. R. V. Slattery read a paper on the radical cure of inguinal hernia, and described his own method of narrowing the internal abdominal ring. He closed the defect in the transversalis fascia by splitting the fascia and overlapping it, after the method of Mayo in dealing with umbilical hernia; the upper leaf of fascia was sutured to Poupart's ligament. Mr. Adams McConnell read a paper on a case of cyst of the common bile duct. He described the clinical appearances of the caes, and noted that the tumour in the right hypochondrium, the slight icterus, and attacks of colicky pain conformed with the symptoms of other cases described. Drainage of the cyst was carried out, and ten months afterwards the wound had to be reopened because of septic infection. After this operation the patient remained well with the fistula closed. He reviewed other cases that had been reported, and discussed the diagnosis and treatment. He pointed out the rarity of the condition, and the fact that his case appeared to be the only one which had survived after drainage alone had been carried out. Mr. C. J. Macauley described a case of acute inflammation affecting a Meckel's diverticulum which extended to but was occluded at the umbilicus. The entire diverticulum had been successfully resected.

POOR LAW MEDICAL OFFICERS.

At a largely attended meeting held in Clones, co. Monaghan, the following resolutions were unanimously passed:

1. That the salaries of Poor Law medical officers are entirely inadequate; that the salaries of dispensary medical officers be £300 per annum, rising annually by £5 to reach £400 and applied retrospectively.
2. That the salaries of union infirmary medical officers be £200 per annum, rising annually by £5 to reach £300 and applied retrospectively.
3. That the salaries of medical officers of health be £75 per annum for urban districts and £50 for rural districts.
4. That fees for inspection of and report on houses under the new housing scheme be one guinea with mileage.
5. That unless legislation is at once introduced to increase the fees for registration of births, deaths, and marriages to 2s. 6d. per entry, the registrars will cease work; that mileage be paid at 1s. 6d. per mile for journeys to superintendent's office, and that a fee of 5s. per death certificate be paid by the Registrar-General.
6. That fees for vaccination be doubled and that 1s. be fixed as fee for registration of vaccination.
7. That locumtenents be appointed at the rate of 7 guineas per week for dispensary districts and 5 guineas per week for workhouse hospitals; that where both duties are combined the fee be 10 guineas per week.
8. That a full month's holiday be granted annually.

Correspondence.

AWARDS FOR MEDICAL DISCOVERY.

SIR,—In his letter in your issue of April 3rd Sir Ronald Ross invites attention to your report of the deputation to Mr. Balfour (BRITISH MEDICAL JOURNAL, March 6th, p. 347) on the above subject. Its perusal should give food for thought to medical men. Three leading members of the profession represented to Mr. Balfour that, in striking contrast to workers in other branches of science, medical men are denied direct pecuniary benefit from their labours in research; and consequently there existed special reasons that funds be placed at disposal for awards to those who, notwithstanding such unfavourable conditions, have given their labour, sacrificed private means or denied themselves pecuniary benefits in efforts which have contributed to the public weal. Sir Clifford Allbutt stated, in respect to the medical profession, "those conditions were governed by the very highest standard of ethics maintained in the profession. . . . No medical man was permitted to take out a patent." Obviously, therefore, the appeal for funds was made on grounds special to the medical profession. The statesman evidently concluded that he might in his reply spare the deputation the thrust that, rightly or wrongly, the self-imposed code of honour of the profession alone prevented medical men from reaping the fruits of their labour; and confined himself to generalizations which concerned workers in science collectively. But his well-known courteous instincts failed to remind him that not the cold charity of the Civil List Fund—obtainable by "influence"—was indicated, but the employment of ways and means of expressing a nation's gratitude for benefits placed, free of charge, at its disposal.

Parliament has no hesitation n awarding many thousands of pounds to the warrior who, at the cost of lives, saves lives and the commercial possibilities of the nation Are men of the type of Ross, who have, by years of toil and self-sacrifice, saved thousands of lives, and not only rendered commerce possible where formerly it was hopelessly handicapped, but have held open the path for the warrior hitherto "held up" by his most formidable enemy—disease—to be afforded less substantial tokens of gratitude? Even that bugbear of officialdom, the creation of a precedent—in this case as to awards for medical research—does not bar action. A grateful nation awarded (1802) Jenner £10,000, but, repenting subsequently of its illiberal

attitude, presented him (1806) with a further gift of £20,000. Nor did he lack practical gratitude in the tropics —Calcutta sent him £6,000.

The *ad misericordiam* refuge of the Civil List Fund cannot fill the rôle desired by the deputation unless vastly altered as to scope and mode of administration. Should, therefore, the views expressed to Mr. Balfour by the deputation secure from Government no adequate response, is it not time the profession considered whether certain of the self-imposed ethical rulings which govern it with iron severity are not anachronisms? Their modification to suit the times need not imply their abolition. Even the drastic rules of Hindu caste, with its similar penalty of excommunication, possess more flexibility than the caste rules of medicine. Manu defines the "conduct of good and virtuous men" as governed by "custom" handed down from time immemorial, but acknowledges the right to alter the interpretation of the *Shastras* when custom alters with the times.

Accepting the analogy, whilst it is still undesirable a medical man should use his position to canvass his patients on politics, why should it be wrong in the present day of much extended franchise (to the advantage of certain sections of the community to an extent that may unfavourably influence the professional classes) for leaders of the profession, without the trades union taint of compulsion, openly to appeal to the profession to vote as a body for certain political ends? In the next six months, in this manner, more could be done to further medical interests than blind adherence to the fetish of old-time ethics has done in a century.

Again, why should it not be possible to frame rulings administered by leading men of the profession which shall permit the taking of patents by research workers, under circumstances not calculated to injure the honour of the profession?—I am, etc.,

April 3rd. W. G. KING, Colonel I.M.S.(ret.).

OUR OPPORTUNITY.

SIR,—I have read with pleasure the letter headed "Our Opportunity" in your last issue.

We do want our independence, individualism, and freedom, and let us work in harmony with the help of the State. The question of remuneration has been settled by arbitration, and would have been fixed long ago, I think, if proper returns had been sent in by medical practitioners. These returns are sent for the benefit of statistics for future use by the State, and ought to be accurate. Most men have done as much again as they have reported. I find that in 1918 and 1919, out of a panel of 450, there were 213 ill and seen on an average six times. Without a proper return of the work done no correct remuneration can be adjusted, or ever will be, so let us look more to the future than we have done in the past, and in doing so save ourselves from being conscripted, as then all independence and freedom must be taken away, never to be restored.—I am, etc.,

Buxton Spa, April 2nd. J. MCOSCAR.

SIR,—Above all things at present the nursing staff visiting the homes of the sick poor should be very largely developed. In the area in which I work I do not know what would be done at all without the help of the district nurses or kindred organizations. In most cases it is not the doctor who "cures" the patient but efficient nursing and carrying out of the doctor's instructions. In whole areas the condition of life is appalling. All the money earned seems to be spent in any other way whatever except that of home comfort. Families earning many pounds a week have often—even usually—little more than rags upon their beds, and quite inadequate quantities even then; this is not from lack of money, but simply that it is what they have been accustomed to. Then, in many cases, I have actually been afraid to accept the offered chair, owing to the verminous condition of everything. How can one expect in cases like that to cure one's patients? One gives instructions, repeats and repeats these to make them understood, and then finds they are forgotten the moment one's back is turned. The hospitals are very willing to help, but their beds are limited in number, and it is with the greatest difficulty one can get the patients to go to the infirmaries of boards of guardians. There is a social slur connected with these, and patients will really often, as they say, "die first" before they go to them.

What I should like to see, as the first step, before everything else, is to try to deal with the sick poor at their homes. Dispensaries, even hospitals, are secondary to this. It is the bed-rock one must get to first. Develop the sanitary side and enormously increase the district nurses, and let every "panel" or "guardian" doctor be able to receive full assistance from both of these. Then, and then only, will there be the basis for a proper medical service for the poor.—I am, etc.,

Bristol, April 5th. E. J. BALL.

CLINICAL CENTRES.

SIR,—The clearing-houses under the Ministry of Health (SUPPLEMENT, March 20th, p. 81) should have suitable accommodation for the various agencies. In addition to roomy, well-ventilated, and well-heated waiting-rooms (male and female), with proper lavatory facilities, etc., there should be separate rooms for infant welfare, maternity, tuberculosis, eye, throat and ear (with dark room), and for bacteriology and pathology. The "centre" should preferably be in close touch with the local hospital, and facilities for *x* ray and light examinations and treatment should be at the centre or hospital. At present nondescript and often inconvenient accommodation is in use wherein it is difficult to do good work.

Half a dozen observation beds would be very advantageous for doubtful cases. An army ambulance van and disinfecting lorry for each centre would be of great use. In choosing the caretaker or porter knowledge and experience of ambulance work and nursing should count.

If permanent buildings are not at present forthcoming, a start might be made with army or Y.M.C.A. huts. Every district provided such structures for the war, and certainly has a moral right to them for an at least equally useful purpose.

Efficient service at the "centre" will soon pay for itself by earlier diagnosis and treatment, with resulting quicker return to school or work.—I am, etc.,

Newport (Mon.), April 5th. J. LEWIS THOMAS.

PUBLIC HEALTH VERSUS THE STATE.

SIR,—Dr. Freer says (March 20th, p. 417), "it was surely in part to mitigate . . . improvidence . . . forcing the spendthrift to make some slight provision for a rainy day" that the Insurance Act was evolved. It was. The trouble is that it has, and must have, so completely failed. Even the Fabian Society's report shows that it has not lightened the burden of the Poor Law. It is well known that there has ever since been an unwonted run on Poor Law beds. Personally (I hold no parish appointment) I have had to have recourse to the Poor Law oftener these seven years than in all my previous professional life.

A poor law is a statutory provision for the poor out of moneys provided by the law. In this Act the major part of the moneys is frankly of the nature of a State subsidy. Even the direct contribution is forced from the employee and is of the nature of a tax deducted at the source. It does not alter the nature, it emphasizes the deteriorating quality, of the law that the majority of its beneficiaries are not in need of State aid. Dr. Freer knows that every effort was made to convince the working class that the benefit was in the main a gift. It is an abuse of terms to call such a process "insurance." The Act is clearly of the nature of a poor law; and it is a relevant corollary that the benefit, to the poor, of a poor law has always been in direct ratio to the scrupulousness of the regard of its administration for desert.

If Dr. Freer remembers that in order to preserve the shiftless from the consequences of shiftlessness both shiftless and thrifty have to be taxed all through their sunshiny days and the thrifty through the rainy days also, he will see that many deserving people are made poorer in order to enrich the shiftless in the time of stress. The process is precisely on all fours with this question of tuberculous mortality: in which the records show that if ten lives are being preserved by State measures eleven are being sacrificed. (The figures are illustrative merely; I have not calculated them out.)

The State has no right to think for England of to-day

merely, and especially not for the individual of to-day; it must think for the community as a whole, future as well as present. Evidence is accumulating day by day of the superiority—to the community—of voluntaryism over compulsion. It is surely better for the State to lessen morbidity than to make provision for sickness, and a very striking example is that under voluntaryism the morbidity of male workers fell in Denmark from 6.2 to 4.9 days per year during the period 1893 to 1912. In Germany in the same period it rose from 6.6 to 8.2. Now that we have done with the Imperial Government, whose interest in fostering the delusion that compulsory State insurance was for the good of a nation was shown by its large expenditure on propaganda, the truth will more and more clearly emerge; the latest German reports are highly instructive reading.

In conclusion, will you let me say, Sir, that I am grateful—and not I alone—for permission to discuss the Act from the larger standpoint of the national welfare. I have always felt it as a reproach that in the most important organ of our profession (of all classes in the world!) the only question in a measure so ambitious and so large as to be—for good or for evil—revolutionary should seem to be its peculiar reaction on our wages.—I am, etc.,

Rayleigh, Essex, March 28th. B. G. M. BASKETT.

HEAT HYPERPYREXIA.

SIR,—Colonel Willcox, in his interesting paper on heat hyperpyrexia (BRITISH MEDICAL JOURNAL, March 20th, 1920), appears to disagree with my view (BRITISH MEDICAL JOURNAL, April 26th, 1919) that suppression of sweating is the primary cause of hyperpyrexial heatstroke. I would therefore be glad if you would kindly grant me space to make a few comments, which may help to clear the doubt that exists regarding the etiology of this important disease.

In case there may be some confusion regarding the meaning of the term hyperpyrexial heat-stroke as used by me in my note of April 26th, 1919, I would mention that it refers to a state of affairs in which the patient is totally unconscious, has a bodily temperature of 110° F. or thereabouts, and is usually in a condition of convulsions or spasms.

In my experience the lowest bodily temperature required to produce this clinical picture is about 108° F., though many cases may reach 109° F., or more, before the unconscious state is reached; my contention is, that although lower temperatures (which are rightly or wrongly attributed to "effects of heat") may be met with while the patient still retains his power of sweating, actual heat-stroke cannot occur until he has stopped sweating for some variable time previously.

It follows, then, that by taking the onset of suppressed sweating as the warning sign, we can in every case prevent the development of this highly dangerous condition by the simple process of artificially sweating the patient as suggested in my note.

Now, as regards the cases of heat hyperpyrexia mentioned by Colonel Willcox which "suddenly occurred in exposed men who were in good health, without any previous evidence of lack of skin action," and in others "though they had been under observation in hospital for several days," I would point out that suppression often comes on with remarkable suddenness and requires the closest observation to detect it. This is why I found it necessary on very hot days to carry out my inspection of all the patients in the ward *hourly*. During these inspections I would frequently find that a patient whose temperature and skin condition had given me no cause for anxiety at 3 p.m. had by 4 p.m. developed complete suppression of sweating and a temperature bordering on heat-stroke. Unless observation is carried out as systematically as this, it is quite possible for one to form the opinion that suppression had not preceded the attack.

I may mention that throughout the heat wave of 1917 I remained constantly in my ward during the hours of the day when attacks were at all likely to occur, and was thus able to study personally every change in the medical condition of the patients. From these observations and the results of preventive treatment (based entirely on the suggested etiology), which has not failed in one single instance, I have no doubt whatever as to the truth of my conclusions.—I am, etc.,

Royal Infirmary, Hull, April 4th. K. G. HEARNE.

SIR,—I was much interested in reading the papers by Drs. Willcox and Leonard Hill in your issue of March 20th. In my experience I have found two points always precede an attack of heat hyperpyrexia—namely, frequency of micturition and absence of sweating. These facts were pointed out in his lectures forty years ago by Professor McLean at Netley.—I am, etc.,

WILLIAM PIKE,
Salisbury, April 2nd. Major-General A.M.S.(ret.).

SYME THE DISCOVERER OF WATERPROOFING.

SIR,—In the interesting note on the brothers Michelin and their famous tyre works, published in the JOURNAL for March 27th, 1920 (p. 458), it is stated that Captain Daubrée, a cousin of the grandfather of the Michelins, "married a niece of the Scottish chemist, Mackintosh, whose name, through his discovery of the solubility of rubber in benzine, has become associated with waterproof garments."

The discovery of the solubility of rubber is much more interesting to the medical profession, for it was really made by Syme. In Dr. Paterson's *Memorials of Professor Syme* (p. 11), the story is told how Syme, as a young student of medicine, only 19 years of age, worked a great deal in practical chemistry. In March, 1818, he made a short communication to the *Annals of Philosophy* announcing the discovery of a new and cheap solvent for caoutchouc distilled from coal-tar. In that communication he said, "It occurred to me that by distilling coal-tar a fluid might be procured which, like naphtha, would have the property of dissolving caoutchouc. After many trials I completely succeeded, and was enabled to carry into effect several of the applications, for which a fluid state of indiarubber had seemed so desirable. Thus I constructed flexible tubes of the substance itself, and rendered various textures waterproof by brushing a thin solution of it into their interstices."

After the appearance of this communication in the *Annals of Philosophy* (which, by the way, was published in Glasgow) the patent was taken out by Mr. Mackintosh, a manufacturer in Glasgow, for the making of waterproof cloth by means of caoutchouc dissolved in coal-tar naphtha. Syme declined the advice of his friends to take out a patent himself, though, if he had done so, as Dr. Paterson says, he might have realized a large fortune independent of his profession. Some years later, in referring to the matter, Syme said that he gained little credit and no profit by the discovery, except the confidence that results in successfully struggling with a difficulty.

Incidentally it might be remarked that in Glasgow a waterproof coat is known as a "waterproof"; it is only in England, and especially in the South of England, that such a garment is called a "mackintosh."—I am, etc.,

Glasgow, March 30th. JOHN PATRICK.

THE TREATMENT OF UTERINE CANCER.

SIR,—I had previously read Dr. Herbert Spencer's lectures, partly because it is my duty to study whatever is published on tumours, but mainly because it gives me pleasure to read what Dr. Spencer writes. It was, however, to the argument of your leading article on the subject that I took exception. It was reactionary. It despaired of the radical treatment of cancer of the uterus; restricted operation and radium were its sole messages of hope. The former is backed up by citing three cures of cancer of the cervix in advanced pregnancy by vaginal amputation. Even Dr. Spencer himself, in spite of the successes which he recorded with restricted operation in these few cases, stated in his paper: "Operable cases should be treated by Caesarean section followed by *extended* abdominal hysterectomy. If the patient is in fair condition the operation is indicated equally on the ground of science and humanity." The deduction from that is obvious.

There was a surgeon of Alexandria, called Leonides, who, while his contemporaries were treating cancer of

the breast by the application of arsenic and verdigris, operated on the disease with the knife and cautery, cutting into the apparently healthy tissues around the evident growth and applying the cautery to the cut surface. He said that the heat of the latter would kill any remaining cancer in the vicinity. Without anaesthetics, ligatures, or antiseptics he probably had a higher mortality than his fellows, but possibly he was lucky enough in a very few cases to eradicate the disease completely. He was a bold man, as befitted his name, *but he lived eighteen hundred years ago.* No surgeon nowadays would content himself with removing the breast alone; even if the axillary glands were not palpable and though the primary growth were small, he would not think of omitting the thorough clearance of the axilla, the extirpation of the regional lymphatic zones, and the wide removal of the affected organ. The problems of the treatment of cancer of the uterus differ in no essential detail from those of the breast. The high amputation of the cervix by the cautery is the eighteen hundred year old operation of Leonides, and its success is about the same. Dr. Spencer treated three cases and had three cures—100 per cent. success. Some say that pregnancy has a bad effect on uterine cancer; some think that it would enable the cancer to be detected at an earlier stage; nobody has had sufficient experience of the uncommon conjunction to know. The numbers are too small to permit of any judgement. It is possible that if Dr. Spencer had operated by the same method on 100 such cases he might have had 97 per cent. of failures. It is a matter of luck. The statistics of 915 *post-mortem* examinations of uterine cancer which I published several years ago showed that in approximately 3 per cent. there was no evident spread of the disease beyond the cervix. If we take it that the naked-eye findings *post mortem* would correspond with what the microscope could reveal during life in the average case, then 3 per cent. would represent, with the ordinary run of luck, the possible cures that high amputation would accomplish.

I do not know what facts and statistics Mr. Dickie desires in order to form a judgement. Radical operations are founded on our knowledge of the surgical pathology of the disease, and their worth is estimated roughly by the proportion of cures to all cases seen and not merely to those selected for operation. By the latter method it is obvious that one has to judge an operative technique as it was ten or more years ago whilst all the while it and its results are improving. On both points—the requirements of pathology and the actual results of operation—I cannot do better than refer Mr. Dickie to Berkeley and Bonney's recent edition of *Gynaecological Surgery.* These authors, who have treated perhaps the largest series of cases in this country, could produce an absolute cure rate of about 25 per cent. Doubtless they and others have improved on that.—I am, etc.,

ARCHIBALD LEITCH.

Pathological Laboratory,
The Cancer Hospital, S.W.,
March 29th.

A NOTE ON ARTIFICIAL PNEUMOTHORAX.

SIR,—In an article in the JOURNAL of March 27th (p. 432), under this heading, Dr. Frederic Coley, while describing the introduction of a stuffing box to the ordinary Saugman pneumothorax needle, makes the following reference to myself: "Dr. Clive Riviere obviates this difficulty" (prevention of the entrance of air) "by tying a piece of sheet india-rubber over the open end of the instrument. I believe he uses this either with his own trocar and cannula in primary operations, or for an ordinary needle in doing 'refills'." May I point out the facts? My own trocar and cannula possesses an obturator or stuffing box with a bayonet catch to prevent it from loosening or falling off. Incidentally, I have grown to dislike the bayonet catch, and I think Dr. Coley's screw may perhaps prove less liable to jamb. In describing the Saugman needle in my book I remarked: "This may be provided with an obturator, as is done in the most modern pattern, or the end may be covered, to prevent the entrance of air while clearing, by a thin rubber cap, through which the stilette is passed." These caps were supplied with the needles, but were not devised by me; I have never resorted to sheet rubber, as suggested. For a long time past I have been using for refills Saugman needles provided with a stuffing box, and the March number of the new journal, *Tubercle*, contains an illustration of this modified needle with the following descriptive notice:

The illustration shows a modification of the well known Saugman needle, carried out by Messrs. Downs Bros. at my request. To the stilette used for clearing its lumen has been added a "stuffing box," and this enables the needle to be cleared while in the chest without any risk (as otherwise occurs) of gas embolism. The needle can be obtained at a cost but little above that of the usual Saugman needle, or the modification can be added to needles which have been already in use.

There are now, therefore, two sources from which Saugman needles provided with a stuffing box may be obtained.

The oblique oval point recommended by Dr. Coley is certainly a safeguard when a pointed needle is used at the first operation, and the same is found on the Forlanini and Brauns needles, and on the Morriston Davies needle in this country. A flat guard, similar to Dr. Coley's "holder," is provided with the Courmont needle, but the nut with which Dr. Coley fixes his holder seems an improvement over the lateral screw on the Courmont plate.—I am, etc.,

London, W., March 30th. CLIVE RIVIERE.

BIOGRAPHY OF SIR WILLIAM OSLER.

SIR,—Lady Osler has requested me to prepare a biography of her husband, and I will be most grateful to any one who chances to see this note for any letters or personal reminiscences, or for information concerning others who may possibly supply letters.

Copies of all letters, no matter how brief, are requested, and if dates are omitted it is hoped that they may be supplied if possible.

If the originals are forwarded for copy they will be promptly returned.—I am, etc.,

Peter Bent Brigham Hospital, Boston, Mass., U.S.A. HARVEY CUSHING, M.D.

Medico-Legal.

LIABILITY UNDER THE LUNACY ACT.

THE case of Everett *v.* Griffiths and Anklesaria, in which the plaintiff in November last sought to recover damages against the defendants on the ground that they had unlawfully and without good faith or reasonable care signed a certificate that he was of unsound mind, and procured his detention as a lunatic in an asylum from March 27th to April 9th, 1919, was referred to in our issue of November 29th, 1919, page 726. It may be remembered that the jury having disagreed, the Lord Chief Justice entered judgement for the defendants upon the ground that Mr. Griffiths was acting in a judicial capacity, and that the certificate which Dr. Anklesaria had given as to the plaintiff's mental condition was not the effective cause of the latter's detention. The act of Mr. Griffiths had intervened and caused the detention. From this decision the plaintiff appealed, and conducted his case in person before the Court of Appeal, which delivered its reserved judgement last week.

Lord Justice Bankes, in his judgement, dealt with the positions of the two defendants separately. Mr. Griffiths in making the detention order was acting under special authority conferred upon him as chairman of the Islington Guardians by the Lord Chancellor under Sec. 25 of the Lunacy Act, 1891. This section provided that every order signed under that authority should have effect as if made by a justice of the peace, and the appellant had urged that this did not afford to Mr. Griffiths the protection which under Sec. 330 was given to a justice of the peace. This contention he considered to be ill founded. If Mr. Griffiths was honestly satisfied, as it was admitted that he was, that the appellant was at the time he made the reception order a lunatic and a proper person to be detained, Mr. Griffiths was justified in making the reception order and it was immaterial whether or not he used reasonable care in arriving at his decision. It therefore became unnecessary to decide whether in acting as he did Mr. Griffiths was performing a judicial or an administrative function.

Dr. Anklesaria was called in to make the examination of the appellant, which was prescribed by statute, and to give the certificate, without which the reception order could not have been made. Although the doctor was not being employed by the appellant, he was under a duty to him, nevertheless, the extent of which was to be determined by reference to the terms of the statute by which the examination was prescribed. The Legislature could only have contemplated an examination conducted with such care as in the circumstances of each case

could come up to the standard of what was reasonable. To go further and adopt the view that a medical man called in by a magistrate to express an opinion on a person who was alleged to be a lunatic might be liable in damages for making an incorrect diagnosis, though he had acted in perfect good faith and used all the care at his command, would be adopting a view which might render the working of the Act in many cases extremely difficult, if not impossible. There was no evidence that Dr. Anklesaria had failed to use reasonable care and such skill as he possessed in his examination of the appellant and in arriving at the conclusion expressed in the certificate, and the appeal in his case therefore also failed.

Lord Justice Scrutton agreed that the appeal should be dismissed, but Lord Justice Atkin, in a dissenting judgement, considered that there was evidence of want of care on the part of both respondents, and that a new trial should therefore be granted.

The result, therefore, was that the appeal was dismissed by a majority of the court, though it should be noticed that the way in which the court approached the case from a legal point of view differed very materially from that in which the Lord Chief Justice had dealt with it.

INSANITY AND CRIME.

THE decision of the Court of Criminal Appeal in the Holt murder appeal last week was chiefly noteworthy on account of the Lord Chief Justice's criticism of the medical evidence which was called in support of the plea of insanity. The question as to the legal effect of insanity as an excuse for crime was raised in debate in the House of Lords in 1843, as the result of what is now known as Macnaghten's case, and it was determined to take the opinion of the judges upon the whole subject. The opinion, which was delivered by Chief Justice Tindal, and which has been treated as the leading case on this branch of law, was as follows:

> Notwithstanding the party accused did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some public benefit, he is nevertheless punishable according to the nature of the crime committed, if he knew at the time of committing the crime that he was acting contrary to the law.
>
> Every man is presumed to be sane, and to possess a sufficient degree of reason to be responsible for his crimes, until the contrary is proved; and to establish a defence on the ground of insanity it must be clearly proved that, at the time of the commission of the act, the party accused was labouring under such a defect of reason from disease of the mind, as not to know the nature and quality of the act he was doing; or, if he did know it that he did not know he was doing what was wrong.
>
> The accused must be considered in the same situation as to responsibility as if the facts with respect to which a delusion exists were real. For example, if under the influence of his delusion he supposes another man to be in the act of attempting to take away his life, and he kills that man, as he supposes, in self-defence, he would be exempt from punishment. If his delusion was that the deceased had inflicted a serious injury to his character and fortune, and he killed him in revenge for such supposed injury, he would be liable to punishment. A medical man who never saw the prisoner previously to the trial, but who was present during the whole trial, cannot, in strictness, be asked his opinion as to the state of the prisoner's mind at the time of the commission of the alleged crime, but where the facts are admitted or not disputed, and the question becomes substantially one of science only, it may be convenient to allow the question to be put in that general form, though the same cannot be insisted on as a matter of right.

In the Holt case the prisoner had murdered a woman at Blackpool. For some time prior to the crime he had been living with her; he had persuaded her to insure her life for £5,000, and had himself opened a banking account in her name on which she had drawn a cheque in payment of the premium; and, finally, the woman had made a will in Holt's favour.

Holt was tried at Manchester Assizes on a charge of murder, and a preliminary inquiry was held as to his fitness to plead. Eminent medical men were called to show that he was insane, but the jury decided that he was fit to plead, and the trial proceeded, with the result that he was convicted and sentenced to death. From this conviction he appealed to the Court of Criminal Appeal, mainly on the ground that he was insane when he committed the crime, and had murdered the woman under an uncontrollable impulse. He also applied to call further evidence in support of his plea of insanity, and the court allowed this to be done.

Dr. Morton (Exeter) said that in 1914 a woman who was said to be a cousin of the prisoner had been admitted into his asylum suffering from delusional insanity and hallucinations of sight, hearing, and smell. A woman who had been a servant to the prisoner's paternal grandfather said that her master was obsessed with the idea that people were trying to poison him. Another medical witness spoke to having played cards with Holt last December and noticed that he could not concentrate his mind upon the game. He considered that Holt was suffering from hallucinations. Dr. Bernard Day said that from the description of the prisoner in the press during the trial at Manchester he had recognized him as a man he had attended in the East for syphilis at the end of 1916. He was then suffering from shell shock and it was impossible to state the effect of syphilis upon a man in that condition without testing the spinal fluid. A medical man spoke to having seen Holt in October, when he seemed "very wild"; and another said that he saw Holt last July, when he noticed that Holt was unable to concentrate his mind upon anything. Finally, two medical men were called, and said that having listened to the evidence they had formed the opinion that Holt was suffering from delusional insanity, and, probably, also from general paralysis of the insane.

The Lord Chief Justice, in delivering the judgement of the court dismissing the appeal, pointed out that it was not necessary to consider whether the tests as laid down in Macnaghten's case should be extended so as to include "uncontrollable impulse," in view of the fact that this had been left to the jury by the trial judge, and had been negatived by them. He criticized the further evidence which had been called, which, he said, was substantially the same as that which had been called on the preliminary inquiry as to Holt's fitness to plead at the assizes, and emphasized the necessity that the tests laid down and established by Macnaghten's case should be complied with. The evidence which had been given as to Holt's mental condition was hypothetical, and it was not sufficient for medical experts to come into court and say generally that a criminal was insane to warrant a verdict of insanity.

Obituary.

JOHN MORTON, M.B., C.M.,

Surgeon, Western Infirmary, Glasgow.

WE regret to record the death of Dr. John Morton of Glasgow, which took place on March 21st at the age of 54. A native of Newmilns, Ayrshire, he received his medical education at Glasgow University, where he graduated as M.B., C.M., with honours, in 1892, when he was awarded the Brunton Memorial Prize as the most distinguished student of his year. He began practice in the west end of Glasgow, at the same time becoming extra dispensary surgeon to the Western Infirmary, with which institution (ultimately as visiting surgeon) he was connected to the time of his death. For seven years he acted as demonstrator in anatomy in the University of Glasgow, and was examiner in anatomy and surgery to the University of St. Andrews. Although severely taxed by the claims of an ever-enlarging consulting surgical practice he found time to make many contributions to medical journals, the chief of these being "Sarcoma," "Strangulated femoral hernia," "Enterectomy with lateral anastomosis: recovery," "Foreign body in sac of hernia, with remarks on the presence of foreign bodies in the abdominal cavity." "An analysis of a series of 400 cases of perforated gastric and duodenal ulcers"—a paper read to the Partick and District Medical Society, of which he was a valued member—was published in this JOURNAL.

Dr. WILLIAM SNODGRASS (Glasgow) writes:

The medical profession of Glasgow has sustained a heavy loss through the death of Dr. John Morton, on March 21st, after operation in a nursing home. After a brilliant career as a student, he settled in the west end of Glasgow and soon enjoyed an extensive and lucrative practice; nevertheless he was always attracted by the scientific aspects of his profession and acted for many years as demonstrator and assistant to Professor Cleland in the anatomy department of the University of Glasgow. He was also appointed dispensary surgeon in Glasgow Western Infirmary, where, on the retiral of the late Dr. Renton, he became one of the visiting surgeons, and where his teaching powers attracted large classes of students. On the outbreak of war he received a commission as Captain R.A.M.C.(T.F.), and had charge of wards in the 3rd Scottish Hospital during the period of the war. Although his health suffered from overwork, he kept resolutely to his post, where his fine personality and keen devotion to duty were widely recognized and appreciated. In his rare moments of leisure he was fond of a round of golf or a game of bowls, and his quiet, cheerful personality will be sadly missed by his many patients and friends. To a sound judgement in diagnosis he added exceptional rapidity, skill, and neatness as an operator, and his death at a comparatively early age when at the full height of his surgical power comes as an irreparable

loss to the community. He is survived by his widow and his only son, Dr. John W. Morton, to whom the medical profession of Glasgow extends its deepest sympathy.

ON Sunday, March 28th, Dr. JOHN M. CLARK, of the medical staff of the Pilkington Orthopaedic Hospital, St. Helens, Lancashire, succumbed to an attack of pneumonia consequent on influenza. For the past fifteen months since his discharge from the army Dr. Clark has given unremitting service to the hospital, and his death is deeply deplored by colleagues and patients. After a distinguished course of medical study in Glasgow University Dr. Clark acted as house-surgeon in Dr. Paterson's wards in Glasgow Royal Infirmary. In 1916 he joined the R.A.M.C., and for almost two years he shared with cheerfulness and devotion the trying life of our troops in German East Africa. To the work of the Pilkington Hospital, with its special aims and methods, Dr. Clark brought earnestness of purpose and outlook, and high professional ability. As chief of staff under Dr. Kerr, the officer in charge, he will be remembered for his unsparing work, his strong kindly personality, and his whole-hearted interest in the efficiency of the hospital and the welfare of the men.

DR. EVAN WILLIAMS, the oldest medical practitioner in Anglesey, died at Llangefni in his 80th year. He was born at Bryngwran and had lived in Llangefni throughout almost the whole of his long professional life. After studying medicine in Dublin and London, he obtained the M.R.C.S. diploma in 1866 and the L.R.C.P.I. and L.M. in the following year. Dr. Evan Williams was for many years district medical officer and medical officer of health. In 1895 he was made a justice of the peace and attended regularly at the local magistrate's court. He took a keen interest in public health matters, educational work, and parochial business. He served on the county council, was a manager of several schools, and a churchwarden. Dr. Evan Williams was a past-president of the North Wales Branch of the British Medical Association and was always a most loyal colleague and zealous member of the Association. As chairman of the Anglesey Panel Committee he further showed his active interest in all that appertained to his profession. He was a hard worker, genial and courteous to all who met him, and possessed a deep sense of duty not only as a professional man but as a citizen. He leaves a son and daughter and numerous grandchildren to mourn his loss.

WE regret to record the death, which took place on March 29th, of Dr. DUNCAN FRANCIS HUNTER of Wallasey, Cheshire. He was educated at Trinity College, Dublin, and graduated M.B., B.Ch., B.A. in June, 1908, proceeding M.D. in the same year. He volunteered for Army service in November, 1915, and served in France with a Territorial division, until invalided in October, 1917. He never truly regained his health after this illness; nevertheless, on his discharge from the army, with the rank of captain, in May, 1919, he returned to private practice in Wallasey, and continued his professional work to the date of his death. He was devotedly attached to the profession of his choice, and with his varied experience and talents of no mean order he would, no doubt, have achieved a conspicuous and honoured position therein. His early death can without doubt be traced to his anxiety to serve his country. He was the only child of Mr. and Mrs. H. W. Hunter, of Lyndhurst Road, Wallasey, both of whom survive him.

DEPUTY SURGEON-GENERAL CHARLES ALEXANDER INNES, R.A.M.C.(ret.), died at Charmouth, Dorset, on March 17th, aged 88. He was born at Bruges, and was educated at King's College, Aberdeen, where he took a bursary, and graduated M.D. in 1855, at the age of 21; also he took the L.R.C.S.Edin. in the same year. He entered the army as assistant surgeon in March, 1855, and became brigade surgeon in 1881, retiring with an honorary step in that year. He served in the 52nd Foot in the Crimea, where he took part in the siege of Sebastopol, and in the expedition to Kertch, receiving the medal with a clasp, and the Turkish medal, and returning to England in charge of the first batch of patients admitted to the Royal Victoria Hospital, Netley; and in the Indian Mutiny, when he was present at the siege, assault, and capture of Delhi, and received the medal with a clasp. His regiment, the 52nd (Oxfordshire), furnished the storming party at the Kashmir Gate. Subsequently he served in the 16th Dragoons, now the 16th Lancers, and after retiring from the army filled the post of medical officer of the prisons at Hull, Coldbath Fields, and Pentonville, successively, for fifteen years. His father, Lieutenant Alexander Innes, 42nd (Black Watch), and his uncle, Lieutenant Hector Innes, 92nd (Gordon Highlanders), served at Quatre Bras and Waterloo.

THE death occurred on March 3rd of Lieut.-Colonel JOHN PERCIVAL HUNT, R.A.M.C. (retired), in his 75th year. After studying at the University of Glasgow and St. Thomas's Hospital he obtained the L.R.C.P.Edin. and L.R.C.S.I. diplomas in 1864. In 1872 he obtained the M.D. degree of the University of Glasgow and the fellowship of the Royal College of Surgeons in Ireland. Colonel Hunt served in the Sudan in 1885-86, receiving the bronze medal and star. In 1884 he was called to the bar as a member of Lincoln's Inn.

MAJOR GEORGE BLACKER ELLIOTT, R.A.M.C., died at Brixham on March 22nd, aged 55. He was the youngest son of the late William Armstrong Elliott, F.R.C.S.I., of Dublin, and was educated in the schools of the Royal College of Surgeons in Ireland in Dublin, and at King's College, London, taking the diplomas of L.R.C.S.I. in 1885, and L.A.H. in 1887. After filling the posts of demonstrator of anatomy in the school of the Royal College of Surgeons in Ireland and of resident surgeon in various Dublin hospitals, he went into practice at Brixham, Devon, where he was medical officer of Brixham Cottage Hospital, medical officer of health to the Brixham Urban District Council, and Admiralty surgeon and agent. He took a temporary commission in the R.A.M.C. as lieutenant on July 5th, 1915, became captain after a year's service, and acting major on March 20th, 1918.

Universities and Colleges.

UNIVERSITY OF LONDON.

M.S. DEGREE: NEW BRANCHES.

THE Master of Surgery degree, which may be taken two years after taking the degrees of M.B. and B.S., has hitherto been conferred in two branches—general surgery and dental surgery. Under new regulations it may now be taken in ophthalmology, or in laryngology otology and rhinology. Candidates in the new branches must produce certificates of having spent at least two years in the study and practice of ophthalmology or laryngology otology and rhinology as the case may be, at a teaching school or schools approved by the university. In certain circumstances the M.S. degree may be taken one year after taking the M.B., B.S. degrees. The M.D. degree is now granted in six branches—medicine, pathology, mental diseases and psychology, midwifery and diseases of women, state medicine, and tropical medicine. Full particulars of all conditions can be obtained on application to the Academic Registrar, University of London, South Kensington, S.W.7.

UNIVERSITY OF LIVERPOOL.

Liverpool School of Tropical Medicine.

THE diploma in tropical medicine has been awarded to the following:

W. J. W. Anderson, C. E. Cobb, Enid M. M. Cobb, D. D. Fernandes, P. T. J. O'Farrell, E. A. Renner, J. C. Vaughan.

UNIVERSITY OF DURHAM.

AT the Convocation held on March 27th the following degrees were conferred:

M.D.—*Essay:* F. J. Nattrass, H. Reah. *For Practitioners of Fifteen Years' Standing:* C. Edwards, D. Fyfe, J. Livingston, R. G. Murray.

D.HY.—W. H. Rowell.

M.B.—T. H. R. Anderson, P. C. Arnold, N. R. Beattie, J. F. C. Braine, R. C. Brown, J. Hetherington, G. Hurrell, C. D. Newman, A. Patterson.

B.S.—T. H. R. Anderson, P. C. Arnold, N. R. Beattie, J. F. C. Braine, R. C. Brown, J. Hetherington, J. D. Johnson, C. D. Newman.

B.HY. AND D.P.H.—S. Scott, A. H. Towers.

UNIVERSITY OF DUBLIN.

TRINITY COLLEGE.

THE following candidates have been approved at the examinations indicated:

FINAL M.B., PART I.—*Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene, Pathology*: *E. S. Horgan, *E. R. Murray, *L. Herzenberg, H. C. C. Deane, Edith F. Willock, P. M. J. Bobbett, Constance McIlrath, L. V. Clifford, D. V. Latham, M. R. Coolican, T. W. Panter, Rita Dillon-Leetch. *Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene*: A. H. N. Todd, Vera G. M. Menary; *Pathology*—Doris Holland. *Pathology—completing examination*: F. Y. Pratt, R. H. J. M. Corbet, J. D. Leahy, R. W. Power, R. S. Chapman, A. J. Beckett, J. M. Semple.

PART II.—*Medicine*: P. Jabkovitz, B. Moshal, G. H. Davis, H. A. Lavelle, A. J. L. Snijman, S. L. Feldman, W. B. J. Pemberton, J. B. Maguire, W. T. Micks, A. Blagoff, A. I. Steyn, F. Healy, D. McElwee, S. R. Hill, J. M. B. de Wet, H. V. Exner, R. E. Murphy, J. F. Sheppard, Elsie A. Burns, J. P. de Villiers. *Surgery*: S. L. Feldman, W. de V. Scholtz, G. H. Davis, W. B. Fox, Olive Baile, F. W. Robertson, Eileen H. Dowse, J. Hirschmann, Janie M. Cummins, W. F. McConnell, J. M. B. de Wet, J. F. Sheppard, D. McElwee, Essie S. Smyth, J. R. Waugh. *Midwifery*: *H. A. Lavelle, *B. Moshal, *A. J. L. Snijman, *G. H. Davis, F. Z. Van der Merwe, M. Nurock, J. F. Wicht, H. V. Exner, J. C. Coetzee, E. W. S. Deale, F. V. Small, C. J. L. Brook, J. M. B. de Wet, W. J. A. Russell, Moira M. Brown, Doris L. Graham, Elsie A. Burns, I. Levy.

D.P.H., PART I (*Bacteriology, Chemistry, Physics, and Meteorology*).—C. C. Boyle, C. J. McCarthy, P. Rock, J. Lyons, T. D. Power, M. J. Graham, P. A. Dormer, C. H. Comerford, J. F. Gaha, C. E. Pengelley, A. H. Price, E. L. Sturdee, W. J. Walker, Mary C. Sheppard.

PART II (*Sanitary Engineering, Sanitary Inspection and Report, Hygiene, Epidemiology, Vital Statistics, Public Health Law*).—T. D. Power, C. J. McCarthy, E. L. Sturdee, J. Lyons, W. B. Walker, N. P. Jewell, G. F. I. Harkness, P. A. Dormer, C. C. Boyle, W. H. Sutcliffe, G. O. F. Alley.

* Passed on high marks.

The Services.

R.A.M.C. PAY IN INDIA.

THE Secretary of State for India announces the introduction of the following scale of grade pay for Regular, Special Reserve, and Territorial officers of the Royal Army Medical Corps in India, with effect from July 1st, 1919:

	Rs. per Mensem.
Lieutenants	550
Captain, on promotion	650
Captain, after five years' total service	700
Captain, after seven years' total service	750
Captain, after ten years' total service	850
Major, on promotion	950
Major, after three years as such	1,050
Lieutenant-Colonel	1,350
Lieutenant-Colonel, after three years as such ...	1,500

Charge allowances as laid down in Army Regulations, India, are admissible in addition to the above rates of pay. Army of Occupation bonus is not admissible concurrently with these rates, but in cases where the old rates with the bonus are more favourable they may be retained until the general abolition of the bonus or until promotion, whichever is earlier. Children's allowance, when admissible under Indian regulations, may be drawn with the new rates of pay up to December 31st, 1919.

These rates of pay will not carry exchange compensation allowance. They are provisional, and will be subject to revision when permanent rates of pay for the Medical Services in India are fixed.

GENERAL IRONSIDE in an appendix to his fourth dispatch makes special reference to Colonel G. St. C. Thom, C.B., C.M.G., A.M.S., for direction of the medical care of the forces at Archangel.

Medical News.

A PRELIMINARY committee has been formed to give to Sir George Thane, who recently resigned the chair of anatomy at University College, London, after forty-two years' service, some mark of the appreciation felt for him by his old pupils and colleagues. The intention is to ask Sir George Thane to sit for his portrait. Sir Rickman J. Godlee is honorary treasurer of the fund; subscriptions should be made payable to the Hon. Treasurer, Thane Testimonial Fund, and sent to him at University College Hospital Medical School, University Street, London, W.C.1.

THE annual meeting of the Canadian Medical Association will be held in Vancouver, British Columbia, from June 22nd to June 25th. The Canadian Public Health Association, the Canadian Association for the Prevention of Tuberculosis, the Canadian Committee on Mental Hygiene, the National Committee for Combating Venereal Diseases, and the British Columbia Hospitals Association will meet at the same place at the same time.

CAPTAIN CHARLES R. B. EYRE, R.A.M.C., has been appointed assistant surgeon to the British Ophthalmic Hospital, Jerusalem. The work of the hospital is increasingly heavy, and the administration is urging the Order of St. John to extend its activities in combating the ravages of eye disease in the Holy Land.

A DINNER will be held in London on June 10th for medical officers, sisters, and V.A.D. nurses of the hospital and other officers who were members of the mess of St. George's Hospital, Malta, 1915–17. Lieut.-Colonel A. de C. Scanlan, C.M.G., will take the chair. Those wishing to attend are asked to write as soon as possible to Miss D. C. Hare, M.D., 1, Bickenhall Mansions, W.1, or Dr. Neill Hobhouse, 146, Harley Street, W.1, enclosing remittance. Tickets (price 10s.) cannot be obtained later than May 20th.

LIEUT.-COLONEL O. E. BULWER MARSH, M.R.C.S., L.R.C.P., R.A.M.C.T. (ret.), Consulting Surgeon to the Royal Gwent Hospital, Newport (Mon.), has been placed on the Commission of the Peace for the county of Monmouth. Lieut.-Colonel Marsh has been president of the South Wales and Monmouthshire Branch, and chairman of the Monmouthshire Division of the British Medical Association.

THE Lady Priestley Memorial Lecture of the National Health Society will be given by Sir George Newman, K.C.B., M.D., F.R.C.P., on Thursday, April 22nd, at the house of the Royal Society of Medicine. The title of the lecture is "Preventive medicine: the importance of an educated public opinion." Sir James Crichton-Browne will be in the chair and the Princess Christian will present certificates to the society's students immediately before the lecture.

A MISSION from France and Great Britain is about to visit America to study its system of medical education and examination. The British members are Sir Humphry Rolleston, K.C.B., M.D., and Dr. Norman Walker of Edinburgh, Chairman of the Examination Committee of the General Medical Council.

AT a meeting of the Académie de Médecine on March 2nd the President, M. Laveran, paid a tribute to the memory of Sir William Osler, who was an associate member of the Académie. Incidentally, M. Laveran recalled that Osler was one of the first to verify in America his discovery in Algeria of the haematozoon of malaria. A sympathetic notice of Sir William Osler was contributed to the *Wiener klinische Wochenschrift* of February 26th by Professor K. F. Wenckebach, director of the first university clinic in Vienna.

AMERICA, responsible for the term "post-graduate," which it now repudiates, has provided a new term—"premedical." We learn from *Science* that the north-western division of the Western Society of Naturalists, meeting on January 2nd, at Portland, Oregon, held a discussion on premedical education in chemistry, in biology, for a surgeon, and as a university course.

ON and after April 15th the address of the Wellcome Bureau of Scientific Research will be 25–27, Endsleigh Gardens, London, N.W.1.

THE Chester Royal Infirmary will receive £5,000 under the will of the late Mr. George Barbour of Chester.

THE new German university which was inaugurated in January, 1919, at Cologne, has now more than 2,000 students and forty professors. An academy of practical medicine had been in existence at Cologne since 1904.

IN February seven cases of rabies were notified in Holland, all of them in the province of Overijssel.

PROFESSOR ERICH MEYER of Strasbourg has recently proposed that medical students in their first year should be required to study nursing and dietetics.

DURING a considerable part of the war it became a habit with German airmen visiting the south-east of England to drop bombs upon Ramsgate, both coming and going. The effect of this was disastrous on the town, which probably suffered more than any British watering-place. It may be hoped that now peace conditions are restored this pleasant and healthy sea-coast town will soon recapture its former prosperity. The leading hotel of Ramsgate—the Granville—situated high on the east cliff, has now reopened to the public after five years; during the war it was used by the military authorities as a hospital for Canadians, and later for British troops. The Granville Hotel is noteworthy for its bathing equipment, including Turkish and Russian baths, an installation for treatment by radiant light and heat, high-frequency and sinusoidal currents, iodine and other baths. This part of the hotel has been reconstructed lately under medical supervision.

DR. J. B. CLELAND has been appointed to the newly created Chair of Pathology in the Adelaide University, South Australia. Professor Cleland, who is a son of the late Dr. W. L. Cleland of Adelaide, studied first in the university of that city, and then went to the University of Sydney, where he graduated in medicine with honours in 1903. After spending a couple of years in cancer research at the London Hospital he was appointed pathologist and bacteriologist to the West Australian Government. Afterwards he did research work in Sydney, and in 1913 was put in charge of the microbiological work of the Health Department of New South Wales. His research work has been chiefly with regard to prophylactic vaccines and bacteriological diagnosis. In conjunction with Dr. Alfred W. Campbell he contributed a paper on encephalomyelitis to our columns in 1919. It dealt with an epidemic which occurred in the late summer of the years 1917 and 1918 in certain parts of New South Wales, Queensland, and Victoria. The conclusion was that the epidemic, though related to acute poliomyelitis and lethargic encephalitis, was distinct from both.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Mediscera, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin (telegrams: *Bacillus, Dublin*: telephone, 4737, Dublin), and of the Scottish Office, 6, Rutland Square, Edinburgh (telegrams: *Associate, Edinburgh*; telephone, 4361, Central).

QUERIES AND ANSWERS.

INCOME TAX.

"H. G. M." inquires whether the special "service" rate of income tax applies to the emoluments of appointments as "civil practitioner in medical charge of troops," or those under the Ministry of National Service.

*** It has to be remembered that the emoluments must be for service of a military or naval character. This would seem to exclude the second of the two cases mentioned. So far as the first is concerned, the answer would appear to depend partly on the amount of work involved; prima facie we should regard it as within the scope of the claim. (See Current Note in the SUPPLEMENT of March 27th, p. 87.)

ANAESTHESIA IN EPILEPTICS.

DR. H. M. COHEN (Anaesthetist, St. Mary's Hospital, Manchester) writes: It is occasionally stated that during the administration of anaesthetics in epileptic patients a well marked seizure takes place. Recently I administered ether in three such patients without noting any unusual phenomena. As a matter of fact, I do not recall having ever seen a seizure during anaesthesia. As this is of more than mere academic interest it should prove useful to have some reliable data on the subject, and I should be glad to learn what the experience of others has been in this direction; and if a seizure has actually been noted, what was the anaesthetic used, and the nature and duration of the operation.

LETTERS, NOTES, ETC.

NIGHT BLINDNESS IN SCURVY.

CAPTAIN C. J. H. AITKEN, M.D., R.A.M.C., writes: In a report of the discussion on the early signs of scurvy at a meeting of the Section of Medicine of the Royal Society of Medicine in the BRITISH MEDICAL JOURNAL of March 6th, 1920, p. 329, it is stated that "special attention was drawn to the symptom of night blindness, as this was the symptom which finally decided the diagnosis." Some years back a cabin boy was sent to me by his captain with a note saying that the boy was unable to get about in the dark. I decided, after examination, that the case was one of nyctalopia. The problem was—What could I do? The next day I visited the captain on his ship and he asked me to examine one of the seamen who had teeth trouble. I found the gums red, swollen, and bleeding. Inquiry elicited the fact that the sailing ship had been much delayed in its voyage because of bad weather and the fresh food had given out. Previous to my visit, which had taken place the day after the arrival of the ship in port, the men had had no fresh food for some weeks. I had the crew paraded and I found that most of them were feeling ill, though none of them presented signs that I associated with scurvy. The case of nyctalopia and the case of bleeding gums made me decide the ship's crew were suffering from scurvy. On fresh vegetables and lemons the crew were all feeling well in a very short time. The man with bleeding gums was the only one of the lot that took some time to get better. The nyctalopia passed away very quickly.

THE APOTHECARY POET'S HOUSE.

JOHN KEATS, who died ninety-nine years ago, at the age of 25, studied medicine at the united hospitals of Guy's and St. Thomas's, and passed the Apothecaries' Hall in the summer of 1816. Thus it is proper to claim him as a member of our profession, though there is nothing to show that the splendour of his poetry owed anything to his medical studies. The house near Hampstead Heath in which he dwelt during the most active part of his literary career is now, we learn, about to be thrown into the market. A representative committee has, however, been formed for the purpose of saving this literary shrine from destruction and for securing it for the benefit of the public for ever. The house, now known as Lawn Bank, is in Keats Grove; the garden is believed to be that

> melodious plot
> Of beechen green, and shadows numberless,

in which the poet composed his matchless lines to a nightingale. To acquire the freehold, restore and repair the building, and adapt it as a Keats memorial house, and so maintain it, £10,000 is needed. Lists of those who contribute will be preserved in the building. The Honorary Treasurer of the Keats Memorial House Fund (Sir Sidney Colvin, the biographer of Keats) will gratefully receive contributions addressed to him at the Hampstead Town Hall, Haverstock Hill, N.W.3.

MOTOR ACCESSORIES.

MESSRS BROWN BROTHERS (Great Eastern Street, London, E.C.) have recently submitted for trial samples of motor accessories including a neat little fixture for sparking plugs, called the Duco plug tester. If one is attached to each plug it is possible to test the firing in one or more cylinders by merely pressing the insulated plungers. With their use the trouble of disinterring screwdrivers is avoided, as well as possible shocks.

The Duco rubber sponges also submitted are stated to be British-made of practically pure rubber. They last longer than ordinary sponges and are equally effective in drying off moisture. They are very effective, therefore, in the washing of motor cars; and their greater cost as compared with ordinary sponges is compensated by their durability.

"Radiator Neverleak" is a remarkable American preparation, also sold by Messrs. Brown Brothers. When added to the water in a leaky radiator it is said effectually to stop the leaks. Although the claim to effect a permanent repair is perhaps exaggerated, there is no doubt that temporary sealing up is effected, without any damage to the cooling system. By its use unnecessary labour, and possible trouble, are avoided until it is convenient to have the radiator dismounted and permanently repaired.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 33, 36, 37, 38, 39, and 40 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 34 and 35.

THE following appointments of certifying factory surgeons are vacant: Melksham (Wilts), Youlgreave (Derby).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Six lines and under	0	7	6
Each additional line...	0	1	3
Whole single column	5	0	0
Whole page	16	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Tuesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.